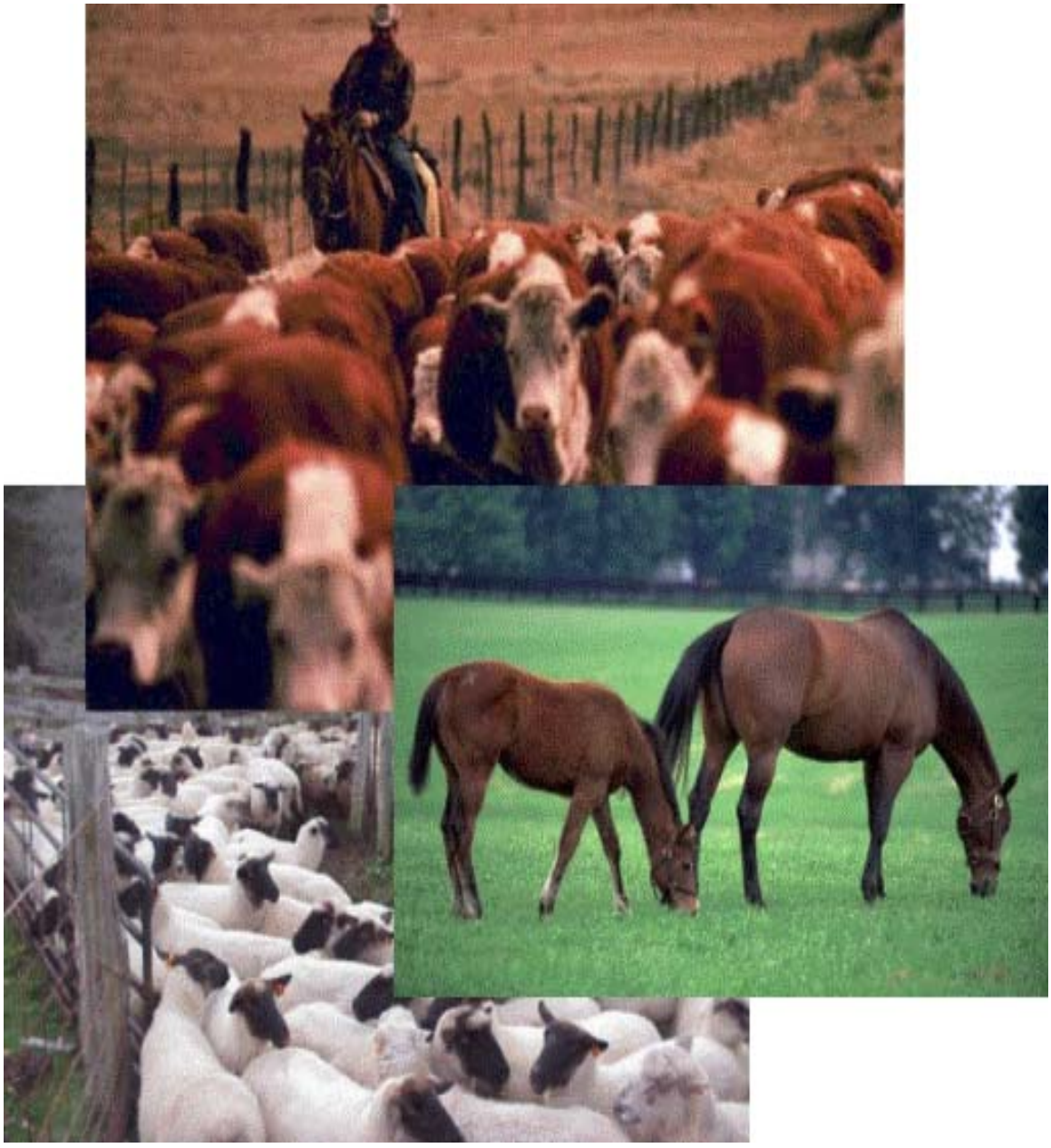
WebGLA User's Manual



Building more productive ranches through grazing land conservation planning

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1

Chapter 1 Resource Data

Resource data refers to the series of information sets that contains databases on non-client data, or general data that is not unique to one ranch. For example, plant species characteristics fall under the category of resource data. Clicking the ***Resource Data*** button will display a list of options for which information set you wish to work with. These sets include:

- Plants
- Animals
- Plant Preference Values
- Growth Curves
- Treatment Responses
- Ecological Sites
- Forage Partitioning Profiles

Information for these databases only needs to be entered once for each geographical area. It is likely that someone has already entered this data for your geographical area. If this is the case, you may skip this section and proceed to the ***Client*** section. If you are responsible for entering the resource data, the following pages will teach you how.

Plants

The ***Plant Form*** allows you to enter data on the plant varieties that grow in your area. These data records may be edited at any time. Icons located at the top of the open window allow you to navigate between the data records. (See the Icon Reference for a quick guide to the navigation icons or hold the mouse's pointer over the icons to bring up their names.)

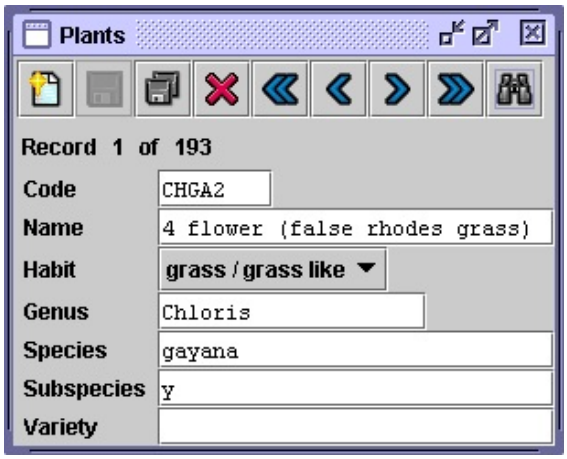


Figure 1.1 Plant Form

Follow the directions below to enter plant data:

1. Click the ***Resource Data*** button at the top of the screen to drop down a menu of options.
2. Choose ***Plants*** from the menu to open up the ***Plants*** database.
3. Click the ***New Record*** button- -to create a new record to enter plant species. (The first time you enter a plant species, webGLA will automatically create a new ***Plants*** record.)
4. Enter the National Plant Symbol in the blank marked ***Code***.
5. Enter the common name of the plant in the blank marked ***Name***.
6. Click on the ***Habit*** button to choose the growth form of the plant. You may choose from the following growth form options:
    - grass/grass like
    - forb
    - shrub/vine
    - tree

Tip

You may find information on National Plant Symbols and scientific names online at the NRCS' Plant Database at http://plants.usda.gov/

7. Enter the Genus and species of the plant into the ***Genus*** and ***Species*** blanks. This is the scientific name of the plant. For example, if the scientific name of your plant is *Pennisetum ciliare* you will enter *Pennisetum* for the Genus and *ciliare* for the species.
8. Enter the subspecies name into the ***Subspecies*** blank if the plant is a specific subspecies.
9. Enter the plant's variety into the ***Variety*** blank if the plant is a specific variety.
10. Click the ***Save Record*** button- -to save the record you have just created.
11. Click the ***New Record*** button- -to create the next ***Plants*** record.

Animals

The ***Animals*** form (figure 1.2) allows you to enter data on the animal groups (sheep, cattle, goats, etc.) that could be grazing your area. Like the ***Plants*** records, the ***Animals*** records can be edited at any time. (See the Icon Reference for a quick guide to the navigation icons at the top of the window or hold the mouse's pointer over the icons to bring up their names.) Unlike the ***Plants*** records, each ***Animals*** record contains a spreadsheet that details the specific group of animals.

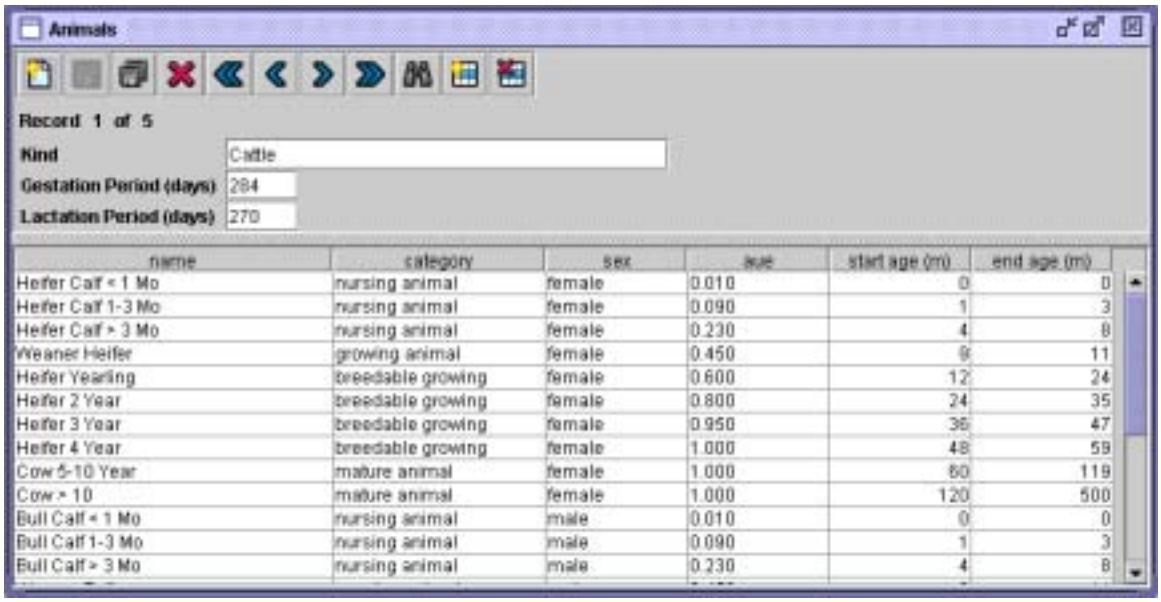


Figure 1.2 Animal Form

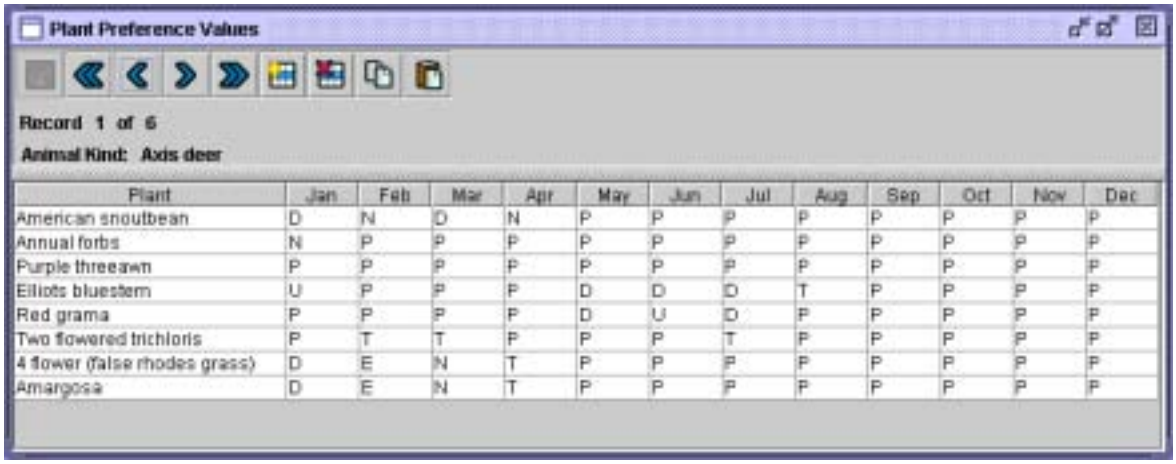
Follow the directions below to enter animal data:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Animals*** from the menu to open up the ***Animals*** database.
3. Click the ***New Record*** button- -to create a new record to enter animals. (The first time you enter an animal group, webGLA will automatically create a new ***Animals*** record.)
4. Enter the kind of animal you will be dealing with in the ***Kind*** blank. The animal kind could be sheep, cattle, horses, or another general animal type.
5. Enter the length (in days) of gestation for that animal in the ***Gestation Period*** blank.
6. Enter the length (in days) of lactation for that animal in the ***Lactation Period*** blank.

7. Click the ***Add Row*** button- -to begin creating the database for the animal type.
8. Enter a descriptive name of the type of animal in the ***Name*** column. This name should indicate the sex and approximate age of the animal.
9. Enter a descriptive condition name of the animal in the ***Category*** column.
10. Enter the sex of the animal in the ***Sex*** column. Possible sexes include:
    1. male
    2. female
    3. castrate
11. Enter the minimum age (in months) that an animal would fall into the group name in the ***Start Age*** column.
12. Enter the maximum age (in months) that an animal would fall into the group name in the ***End Age*** column.
13. Click the ***Add Row*** button- -to continue creating the database for the animal type.
14. Click the ***Save Record*** button- -to save the record when you are ready to move to the next animal kind.
15. Click the ***New Record*** button- -to create the next ***Animals*** record.

Plant Preference Values

The ***Plant Preference Values form*** allows you to indicate what type of plants certain animals like to eat at specific times of the year. This form contains a spreadsheet and may be edited at any time. (See the Icon Reference for a quick guide to the navigation icons or hold the mouse's pointer over the icons to bring up their names.)



Plant	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
American snoutbean	D	N	D	N	P	P	P	P	P	P	P	P
Annual forbs	N	P	P	P	P	P	P	P	P	P	P	P
Purple threeawn	P	P	P	P	P	P	P	P	P	P	P	P
Elliots bluestem	U	P	P	P	D	D	D	T	P	P	P	P
Red grama	P	P	P	P	D	U	D	P	P	P	P	P
Two flowered trichloris	P	T	T	P	P	P	T	P	P	P	P	P
4 flower (false rhodes grass)	D	E	N	T	P	P	P	P	P	P	P	P
Amargosa	D	E	N	T	P	P	P	P	P	P	P	P

Figure 1.3 Plant Preference Values Form

Follow the directions below to create an Animal Preferences database:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Plant Preferences Values*** from the menu to open up the ***Plant Preferences Values*** database.
3. Click the arrow button to select the animal kind you wish to work with. These choices are dependent upon the ***Animal Kinds*** you entered in the ***Animals*** section. If you entered horses, sheep, and goats in the ***Animals*** section, you will be allowed to choose between horses, sheep, and goats.
4. Click the ***Add Row*** button to begin creating the preferences database for the animal type.
5. Enter the name of the plant in the ***Plant*** column.
6. For each month enter the code for the animals' preference of the plant during that time.

1. P-Preferred
2. D-Desired
3. U-Undesired
4. E-Emergency
5. T-Toxic
6. N-Non-consumed

7. Click the ***Add Row*** button- -to continue creating the database for the plant preferences of the currently indicated animal kind.
8. Click the ***Save Record*** button- -to save the record when you are ready to move to the next animal kind.
9. If you have several plants with the same preference values, you can use the copy and paste features to speed up data entry. Simply highlight the row with the preference values you wish to copy. Click the ***Copy*** button - - to copy the row.
10. Click the ***Add Row*** button- - to add a new bank row. Highlight the row. Click the paste button - - to paste the copied values into this row.

Growth Curves

The ***Growth Curves*** screen (figure 1.4) allows you to build plant growth curves for the ecological sites in your area. A growth curve is a graph that details the percent of plant production in a year. The upper portion of the screen allows you identify and describe the ecological site, and the lower portion of the screen lets you enter plant production percentages for each month of the year.

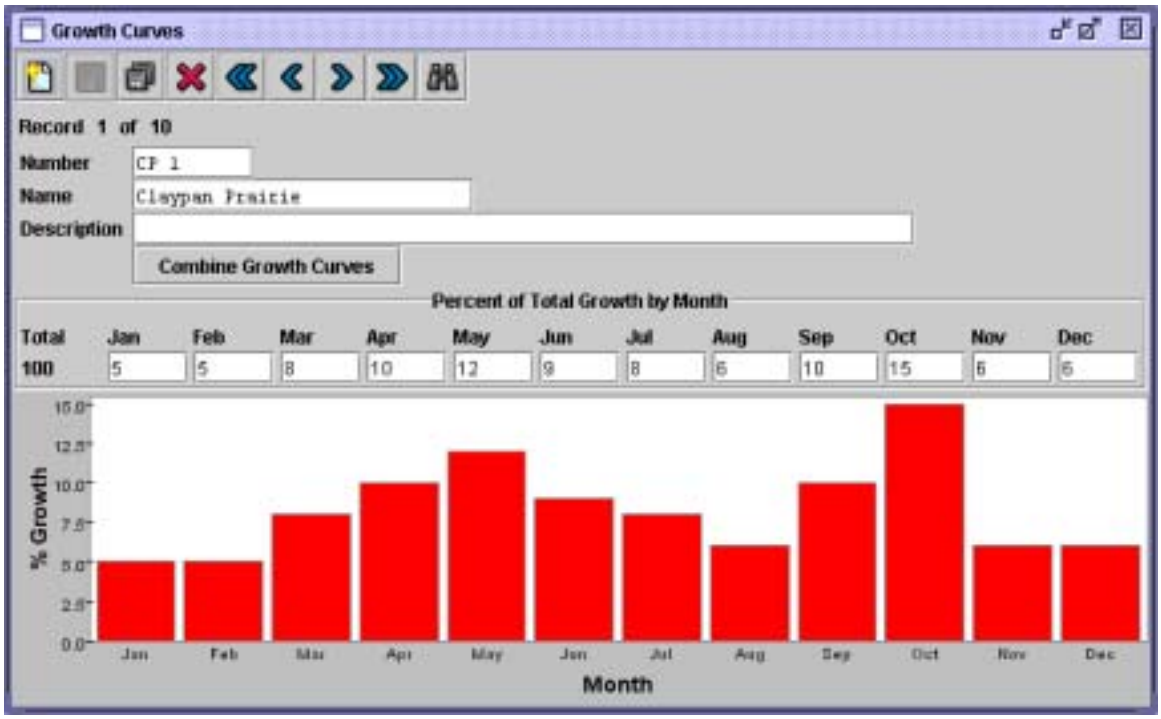


Figure 1.4 Growth Curve Form

Follow the directions below to create your Growth Curves database:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Growth Curves*** from the menu to open up the ***Growth Curves*** database.
3. Click the ***New Record*** button- -to create a new record to enter growth curves. (The first time you enter information for growth curve, webGLA will automatically create a new ***Growth Curves*** record.)
4. Enter the 6 digit ID for your growth curve in the box labeled ***ID***. This code should consist of the 2 letter postal code for your state and a four digit numerical code. For example: TX0001.

5. Enter the name of your growth curve in the box labeled ***Name***.
6. Write a brief description of your growth curve in the box labeled Description.
7. Enter the monthly percent of plant growth in the month boxes under the section labeled ***Percent of Total Growth by Month***. Round these percents to the nearest whole number. You can get these percents from clipping studies, expert opinions, plant growth models such as **PHYGROW**, etc.
8. Click the ***Save Record*** button- -to save the record when you are ready to move to the next ***Growth Curve***.
9. Click the ***New Record*** button- -to create the next ***Growth Curve***.

If you have an ecological site that is the combination of two or more growth curves, you can combine the curves of different ecological sites by using the **Combine Growth Curves** button.

1. Click the ***New Record*** button - - to add a new record.
2. Enter in the number, name and description of the growth curve.
3. Click the **Combine Growth Curves** button. Click the ***add row*** button - - to add a new row.
4. Click in the ***Growth Curve*** column and select the growth curve you wish to combine.
5. Click the ***Percent*** column and define the percent of that growth curve present in the ecological site. Make sure all of the numbers in this column add up to 100.
6. Repeat the process until you have added all of the growth curves you wish to combine.
7. Click the ***OK*** button to create your growth curve.
8. If you are satisfied with the growth curve, click the ***Save Record*** button . If you are not satisfied, you can redo the growth curve by click the ***Combine Growth Curves*** button again.

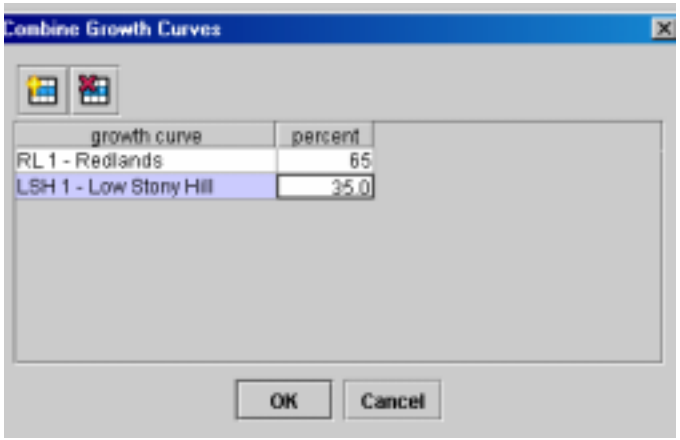


Figure 1.5 Combine Growth Curves

Treatment Responses

The ***Treatment Response*** (figure 1.7) section allows you to predict the way a range management practice will affect the total yield of the plant population over a twenty year period.

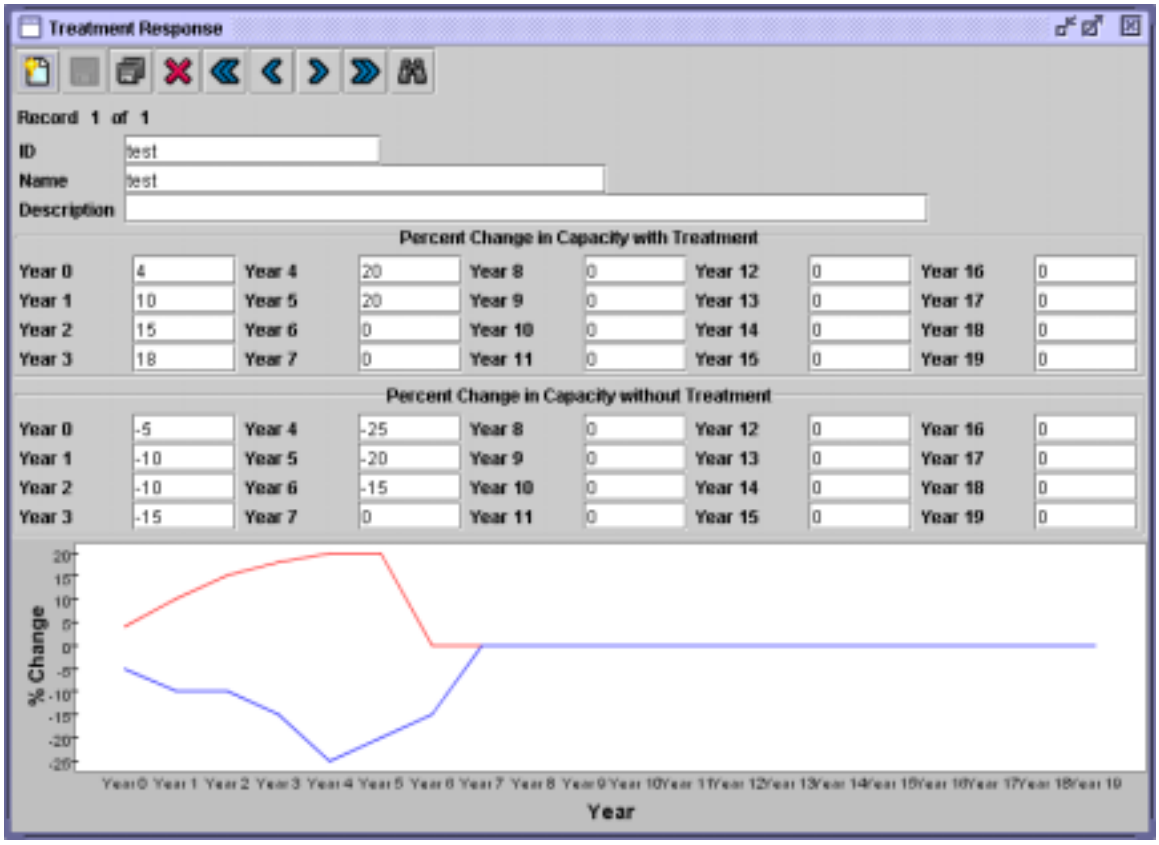


Figure 1.6 Treatment Response Form

Follow these directions to create a treatment response graph:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Treatment Response*** from the menu to open up the ***Treatment Response*** database.
3. Click the ***New Record*** button- -to create a new record to build treatment response graphs. (The first time you enter information for a treatment response, webGLA will automatically create a new ***Treatment Response*** record.)
4. Enter the 6 digit ID for your growth curve in the box labeled ***ID***. This code should consist of the 2 letter postal code for your state and a four digit numerical code. For example: TX0001.

5. Enter a descriptive name of the management practice you wish to graph in the box labeled ***Name***.
6. Enter a brief description of your management practice in the ***Description*** box.
7. Begin entering the proposed percent change in plant yield in the ***Year*** boxes found in the ***Percent Change in Capacity With Treatment*** section.
8. Enter the expected percent change in plant yield without treatment in the ***Percent Change In Capacity Without Treatment*** section.

> **Tip**
>
> The **Percent Change In Capacity Without Treatment** section is usually a decrease in plant yield. Be sure to include a negative sign (-) when entering the values.

9. Click the ***Save Record*** button- -to save the record when you are ready to move to the next ***Treatment Response*** record.
10. Click the ***New Record*** button- -to create the next ***Treatment Response*** record.

Ecological Sites

The ***Ecological Sites*** database allows you to compile a list of the types of ecological sites found in your area. The ***Ecological Sites*** database stores the data in a spreadsheet format for future use in the program. You should complete this database before moving on to the ***Growth Curve*** database.

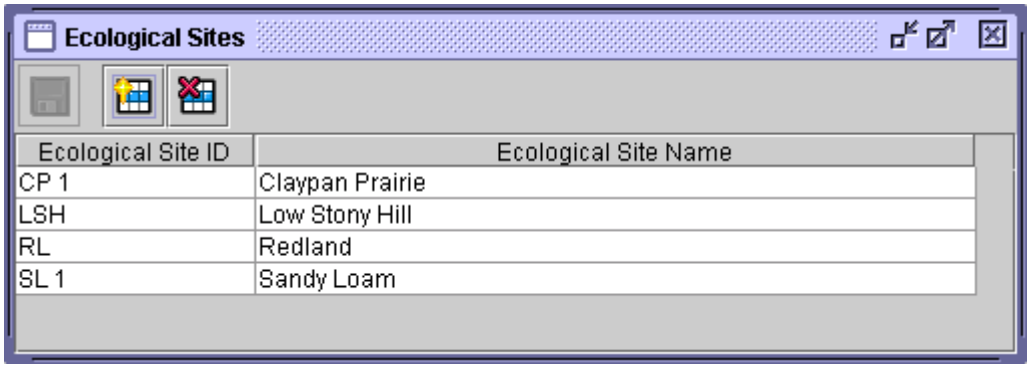


Figure 1.7 Ecological Sites Form

Follow the directions below to enter data into the ***Ecological Sites*** database:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Ecological Sites*** from the menu to open up the ***Ecological Sites*** database.
3. Click the ***Add Row*** button- -to begin creating the database for the ecological sites.
4. Enter the **National Code** for your ecological site in the ***Ecological Site ID*** column.
5. Type the descriptive name of your ecological site in the ***name*** column.
6. Click the ***Add Row*** button- -to continue creating the database for the ecological sites.
7. Click the ***Save Record*** button- -to save the Ecological Sites database when you are done entering ecological site data.

Tip

National Codes may be found online at the ESIS website: http://ironwood.itc.nrcs.usda.gov/scripts/ndISAPI.dll/range
The National Code consists of the following:

- 3 digit numerical MLRA
- 2 digit alphabetical sub-MLRA
- 3 digit numerical site identification
- 2 digit alphabetical postal abbreviation for your state

Forage Partitioning Profiles

The ***Forage Partitioning Profile Form*** allows you to compile a database of schedules for different types of land. These forage partitioning profiles will be used later when you detail your client's management units.

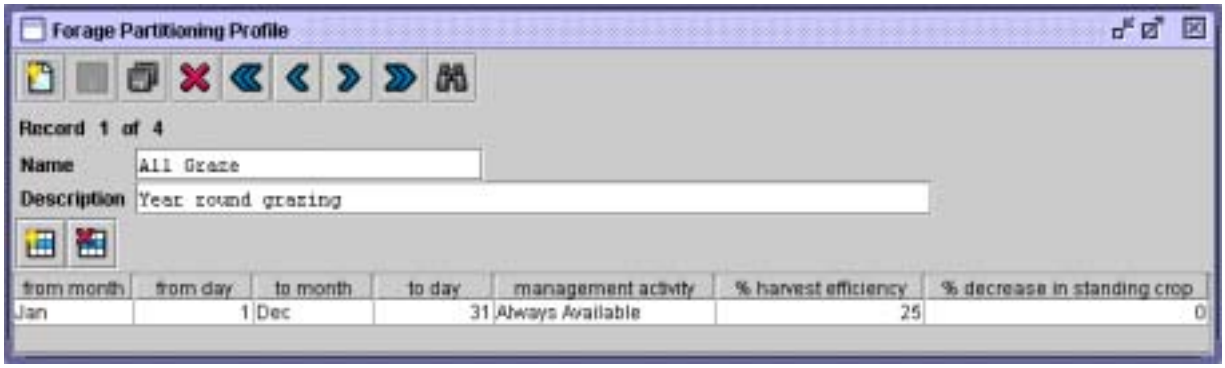


Figure 1.8 Forage Partitioning Profile Form

Follow the directions below to create a ***Forage Partitioning Profile***:

1. Click the ***Resource Data*** button to drop down a menu of options.
2. Choose ***Forage Partitioning Profile*** from the menu to open up the ***Forage Partitioning Profile*** database.
3. Click the new record button to start a new record. Type in a name and a description for your profile.
4. Click the ***Add Row*** button- - in the middle of the screen to begin creating the spreadsheet for the ***Forage Partitioning Profile***.
5. Enter the date you will begin your grazing or roughage practice in the columns marked ***from month*** and ***from day***. The ***from month*** column will drop down a list of months for you to choose from, but you will need to type the day.
6. Enter the date you will end your grazing or roughage practice in the columns marked ***to month*** and ***to day***. The ***to month*** column will drop down a list of months for you to choose from, and then type in the day you wish to end.

7. Click the Management Activity column to choose from the following grazing or roughage practices:
    1. Grazed
    2. Harvest Roughage
    3. Restricted Use
    4. Land practice
8. Enter the percent that the selected practice will affect the total plant yield in the column marked ***% harvest efficiency***.
9. Enter in the percent decrease in standing crop due to land treatment or some other case where the standing crop is being affected other than by animals in the ***% decrease in standing crop.*** Under grazing schemes leave this column zero. This column should only be used when ***land treatment*** is selected from the ***management activity*** menu.
10. Click the ***Save Record*** button- -to save the record when you are ready to move to the next ***Forage Partitioning Profile***.
11. Click the ***New Record*** button- -to create the next ***Forage Partitioning Profile***.

2

Chapter 2 Mapping in webGLA

The ***Map Tool*** for ***webGLA*** allows you to use satellite images or aerial photographs of your clients' ranches to construct a forage inventory. The forage inventory will reflect management units, water distribution, land treatment and various accessibility features of the ranch. This tool allows you to visually organize the information needed to plan grazing programs, apply conservation practices or rearrange fencing patterns. The map is organized into a series of layers that work on top of each other to create your map:

- Map Window Orientation
- Image Layer
- Boundary layer
- Management Unit Layer
- Inventory Site Layer
- Water Points & Distribution Layers
- Adjustment
- Response Unit Layer

Once you have created the layers, you may turn them on and off by checking and un-checking their boxes on the left side of the screen.

Orientation of the Mapping Window

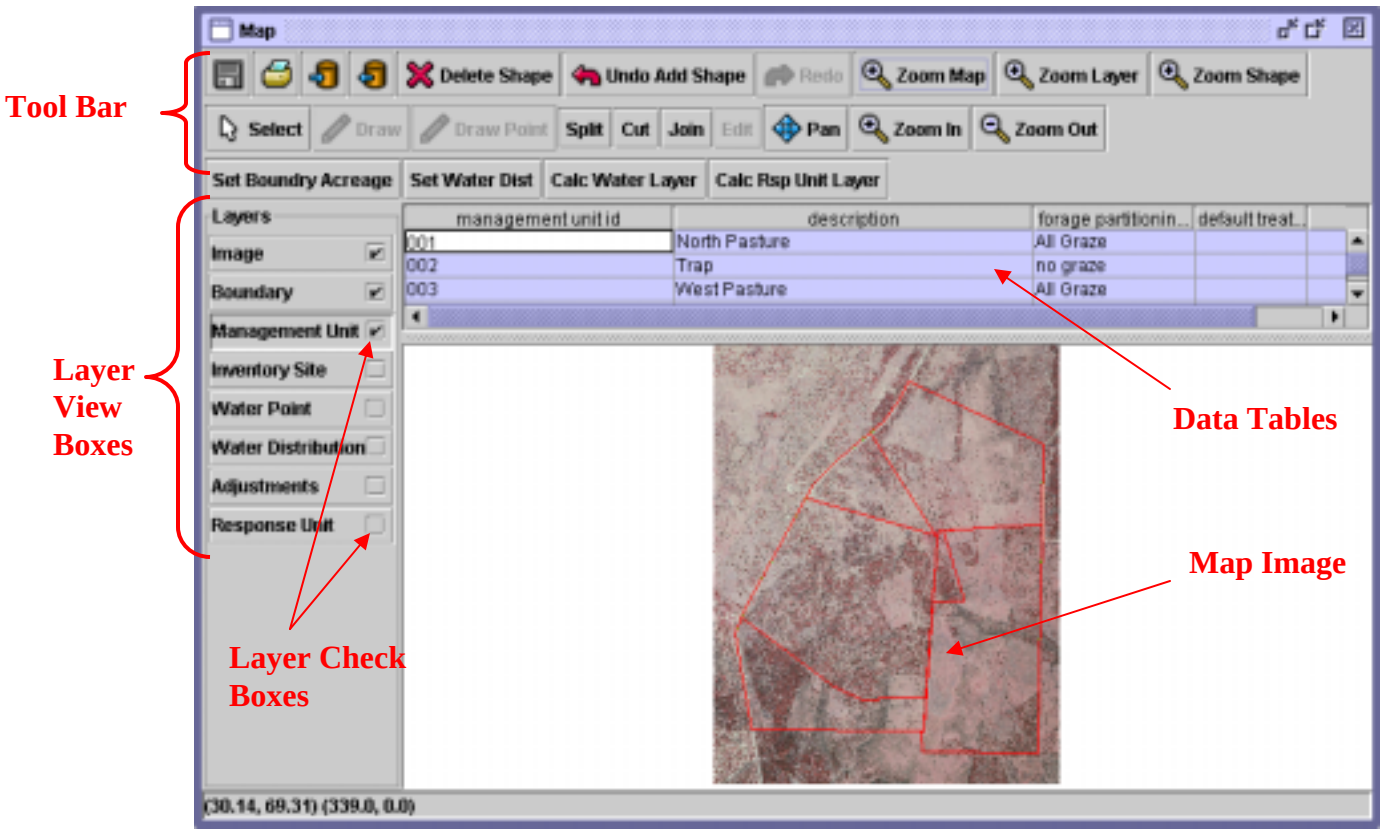


Figure 2.1Map Window

To open ***webGLA***'s ***Map Tool***, you must set a client in the client section (see page 41 to learn how to set a client). After you have set a client, click the ***Client Data*** button to drop down a menu of options and choose ***Map*** from the menu to open up the ***Map Tool*** window.

Figure 2.2 shows the ***Map Tool*** window. The labels identify the main sections of the window:

Tool Bar - The ***Tool Bar*** holds the basic tools and navigation icons of the ***Map*** window. See page 70 for details on the ***Map Icons***.

Data Tables - The ***Data Tables*** display information for the selected layer.

Layer View Boxes - The ***Layer View Boxes*** allow you to view tables of individual layers. The selected layer will appear sunken. Click on a layer to edit the layer on the map, or to edit/view the table data. In figure 2.2, the ***Image*** layer has been selected.

Layer Check Boxes - The ***Layer Check Boxes*** allow you to select which layers you wish to display on your map. If you do not wish to view a layer, simply click on the layer's check box to hide it.

Map Image - This is the current image of your map.

Familiarizing yourself with the basic layout of the ***Map Tool*** window will allow you to work more quickly and efficiently.

Image Layer

The first step in creating a map for your ranch is to open the aerial photograph or satellite image. You should already have this image processed and stored into your computer's hard drive. This image is called the ***Image Layer*** (figure 2.3) and will be the foundation of your map.

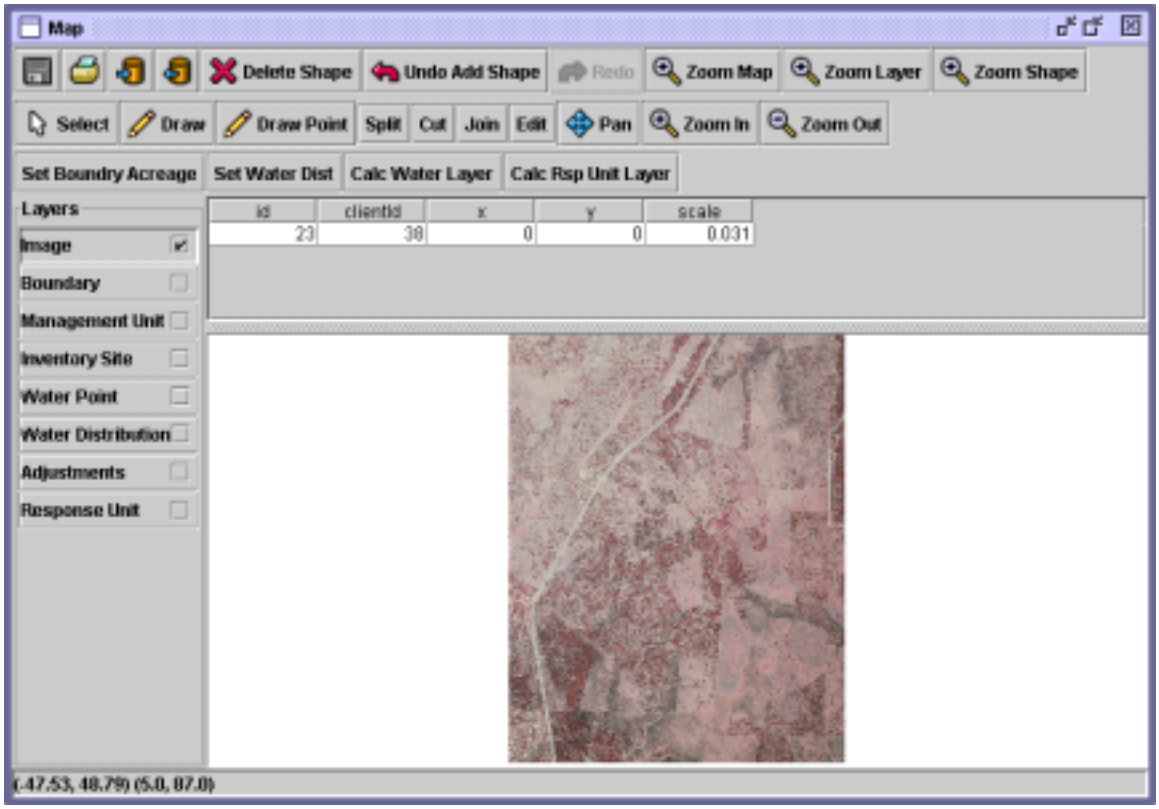


Figure 2.2 Image Layer

Follow these directions to create the ***Image Layer***:

1. Click on the ***Image*** button located on the left side of your screen in the layers column.
2. Click the ***Open File***- -button.
3. Find your file to open. Make sure the file is of type ***.jpg, .gif, .png***.
4. Click ***Open*** to open up the image on your screen.
5. To learn more about the tool bar in the map window, please view the icon reference sheet.

Boundary Layer

After you pull up your ***Image Layer***, the ranch ***boundary*** should be created.

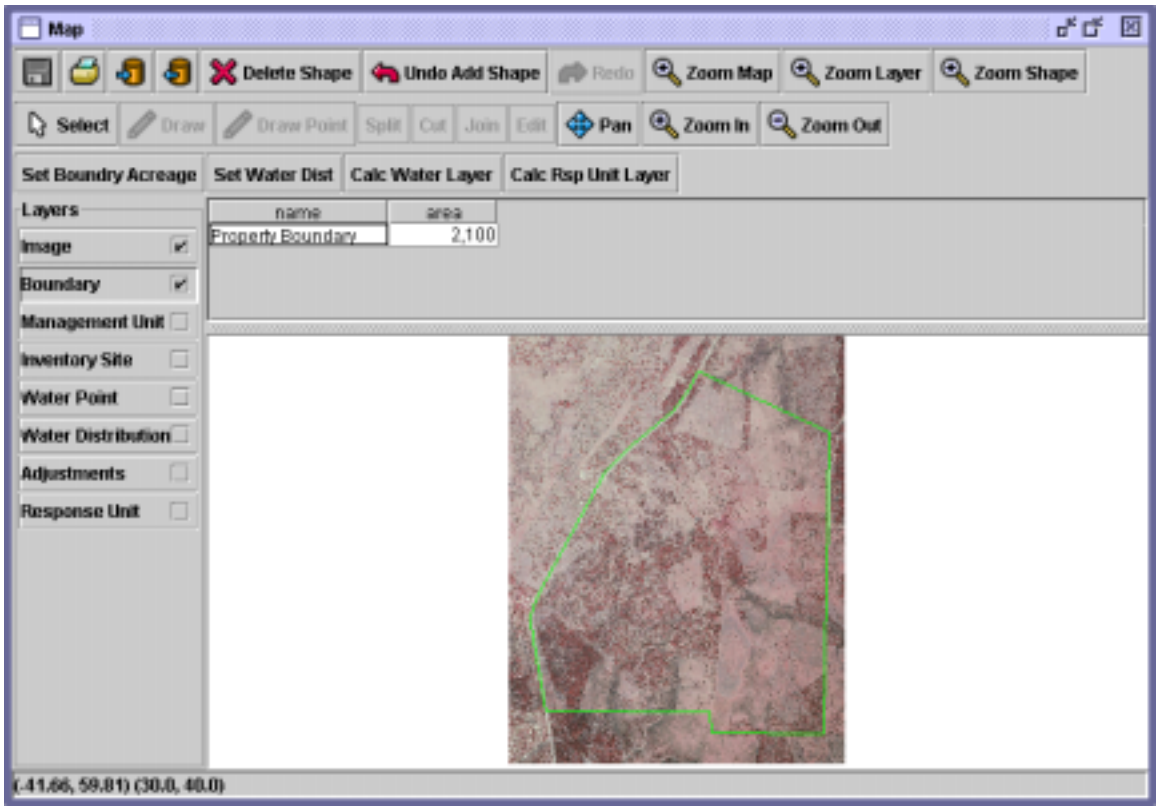


Figure 2.3 Boundary Layer

Tip

If you did not get the boundary in the right place, don't worry. If your shape is still incomplete, you can right click your mouse to delete vertices. If you have completed the shape, click the **Edit** button. Click on the boundary. This will display all of the vertices of your shape. Click and drag the incorrect vertices into the correct spot. To exit the edit feature, click the select button.

1. Click the ***Boundary*** button in the layers panel.
2. Click the Draw icon- -to begin drawing your boundary.
3. Outline the entire perimeter of the ranch by clicking at the corners of the ranch. To outline curved lines, simply place many vertices to make it appear like a curve.
4. Double click on the final corner to set the shape.
5. Click the ***Set Boundary Acreage*** button in the second row of buttons at the top of the screen to enter the total area of the ranch in acres. You should be able to find this number in the deed to the property. **You must enter the ranch area correctly as it is necessary for calculating the remaining data.**

Management Unit Layer

After defining the boundary, it is time to separate the ranch into the ***Management Units*** that will form the ***Management Unit Layer*** (figure 2.4). These management units are man-made "pastures" and you can often just follow the fence lines that appear in the picture.

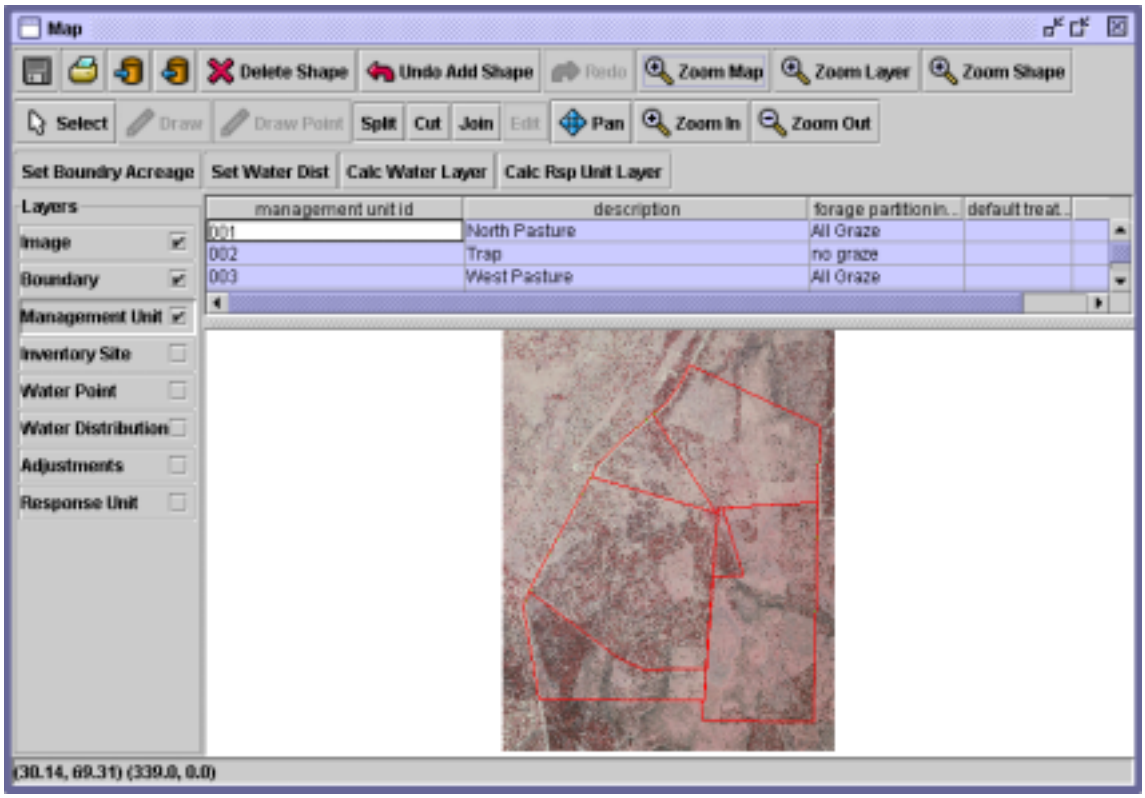


Figure 2.4 Management Unit Layer

Tip

When using the **split** tool, it is not important to click exactly on the boundary line. Instead, make sure you start and stop your split line outside of the boundary line.

Also, you can use existing management units (including those just created) as a boundary to cut from just as you would use the property boundary.

1. Click the ***Management Unit*** button in the layers section.
2. Click the ***Split*** button and draw lines to split up the ranch internally. You are "cutting out" smaller management units from the single large boundary.
3. Double click at the end of the line to split the area. Using ***Split*** reduces your work and prevents slivers of empty space from appearing around the borders of shapes.
4. Outline the entire perimeter of the management unit by clicking along the outline of the management unit. To outline curved lines, simply place many vertices to make it appear like a curve.

5. Double click on the final point to set the shape.
6. Continue splitting your ranch until all management units have been defined.
7. Enter the description (name), forage partitioning profile and default treatment response in the appropriate columns of the table at the top of the screen.
8. The ***Cut*** tool may also be used to create a management unit. The cut tool should only be used to cut out management units that are not adjacent to the boundary or a management unit.
9. Click on the ***Cut*** button to begin. Draw your management unit by clicking on the image to place your vertices.
10. To end your drawing, double click on the last vertex.
11. Enter the description (name), forage partitioning profile and default treatment response in the appropriate columns of the table at the top of the screen.
12. Click the save button - - to save your work.

Warning!

We highly recommend saving all work before using the **cut** tool. The only way to revert the changes made by using the cut tool is to close the map window **without saving** your work.

Inventory Site Layer

The ***Inventory Site Layer*** (figure 2.5) allows you to map out the boundaries of the different inventory sites and set certain characteristics for each section. You may designate your inventory site as either an ecological site or a forage suitability group. According to the 1997 National Range and Pasture Handbook distributed by the NRCS an ecological site is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation. A forage suitability group is a soil with similar species adaptation, production potential, and management needs. If there are significant differences in the vegetation within the inventory sites, you must mark out those sub-areas as separate inventory sites. If you feel a different transect applies to a section of a site within a management unit, then draw that section.

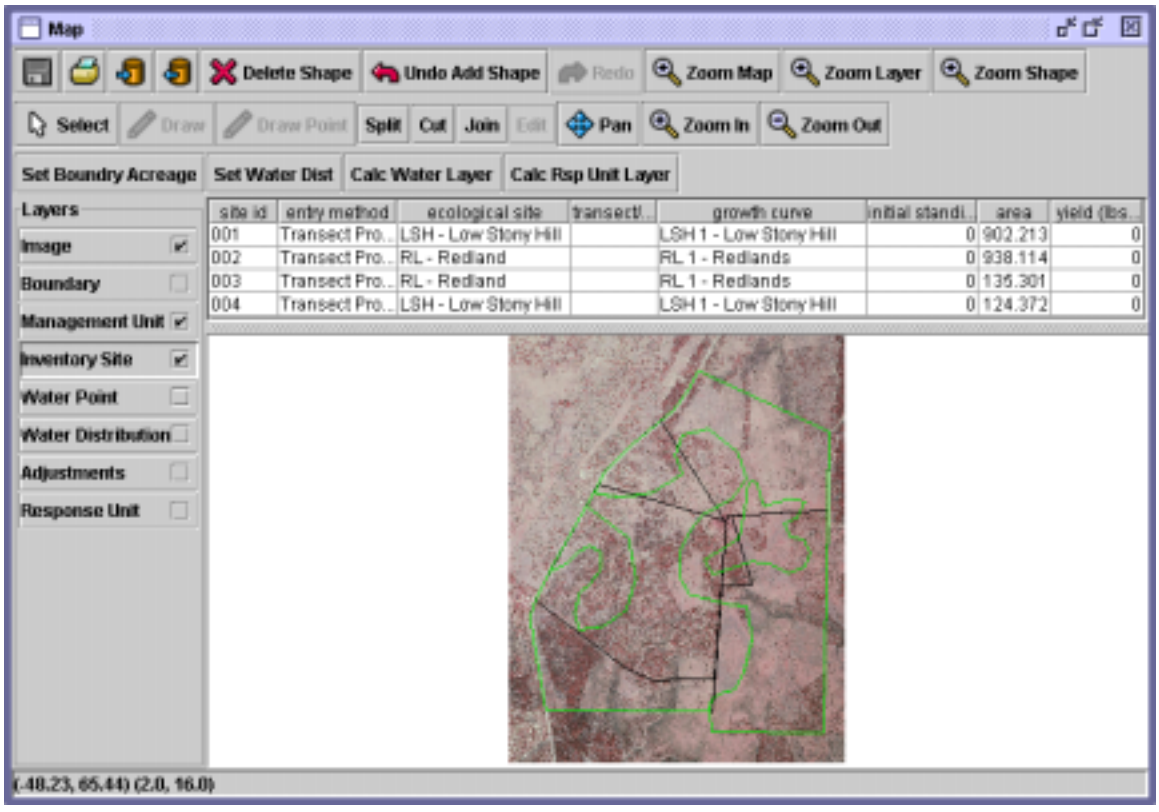


Figure 2.5 Inventory Site Layer

Follow the directions below to create the ***Inventory Site*** layer:

1. Click the ***Inventory Site*** button from the Layers section at the left side of the screen.
2. Use the ***Split*** or ***Cut*** tools to create each inventory site as was done with the Management Unit Layer.
3. After you have drawn you Inventory Sites, select one of your inventory sites with the select tool. A red outline will appear around the selected shape.
4. Find the ***Entry Method*** column in the table at the top of the screen.
5. Click on the ***Entry Method*** box to select from the following choices:
    1. Usable Forage Production
    2. Transect Production
    3. Animal Preferences Basis
6. If you select the transect method, you must select a transect in the transect column. WebGLA will calculate Forage (lbs/a) automatically. If you select the Usable forage production method, you must enter the forage value directly in the ***usable forage*** column. If you select the Animal Preference method, you must select a scenario created using the Preference Based Stocking Calculator.
7. Choose the ***name*** of the Ecological Site from the drop down list in the Ecological Site column.
8. If you selected ***transect*** or ***animal preferences*** in the ***Entry Method*** column, Choose the ***transect*** or ***Preference Based Stocking Calculator scenario*** from the drop down list in the ***transect/scenario*** column.
9. Choose the ***growth curve*** from the drop down menu in the ***growth curve*** column.
10. Enter the ***initial standing crop*** of grazeable plant matter for the site in pounds per acre in the ***initial standing crop*** column, if necessary.
11. Repeat these steps until you have entered the information for all shapes in the ***Inventory Site*** layer.

Tip

Inventory sites are not straight lines and are usually very curvy. Be careful when drawing the curves that you do not click too fast, as the program may interpret fast clicks as a double click. This will end your line, forcing you to have to start over.

Water Points & Distribution Layers

The ***Water Point*** layer (figure 2.6) allows you to specify where the animals on your ranch will get water. This will help ***webGLA*** predict grazing patterns or radii for your animals.

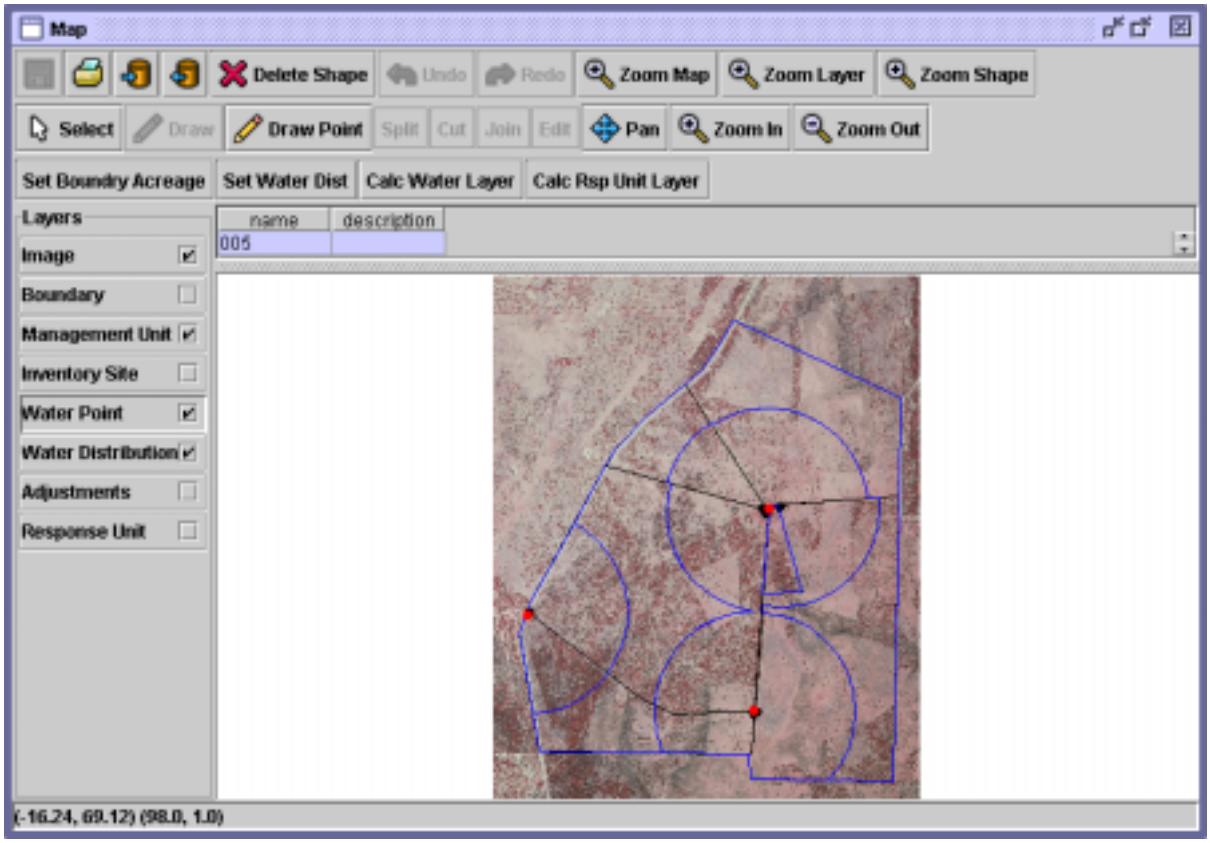


Figure 2.6 Water Point Layer

Follow these directions below to create water points.

1. Click the ***Water Point*** button from the Layers section at the left side of the screen.
2. Click the ***Draw Point*** icon- -to begin setting your water points.
3. Find the place on your map where the first water point is.
4. Click once on the location of the water point to set the ***Water Point***. A small red dot will appear to show that you have set the ***Water Point***.
5. Continue finding and setting ALL remaining ***Water Points***.
6. Click the ***Set Water Distance*** button.
7. Edit the water distances and adjustment factors as needed.
8. Click the ***Calculate Water Layer*** button to calculate the ***Water*** layer (figure 2.6). This will automatically create the water distance circles for the ***Water*** layer.

Adjustment Layer

The ***Adjustment*** layer (figure 2.8) allows you to create areas to adjust for lower harvest efficiency levels. For instance an area with a steep slope may be grazed 70% less than a flat area. Another example, shown below, is a cedar stand that only has 10% of the available forage as the rest of the area surrounding it.

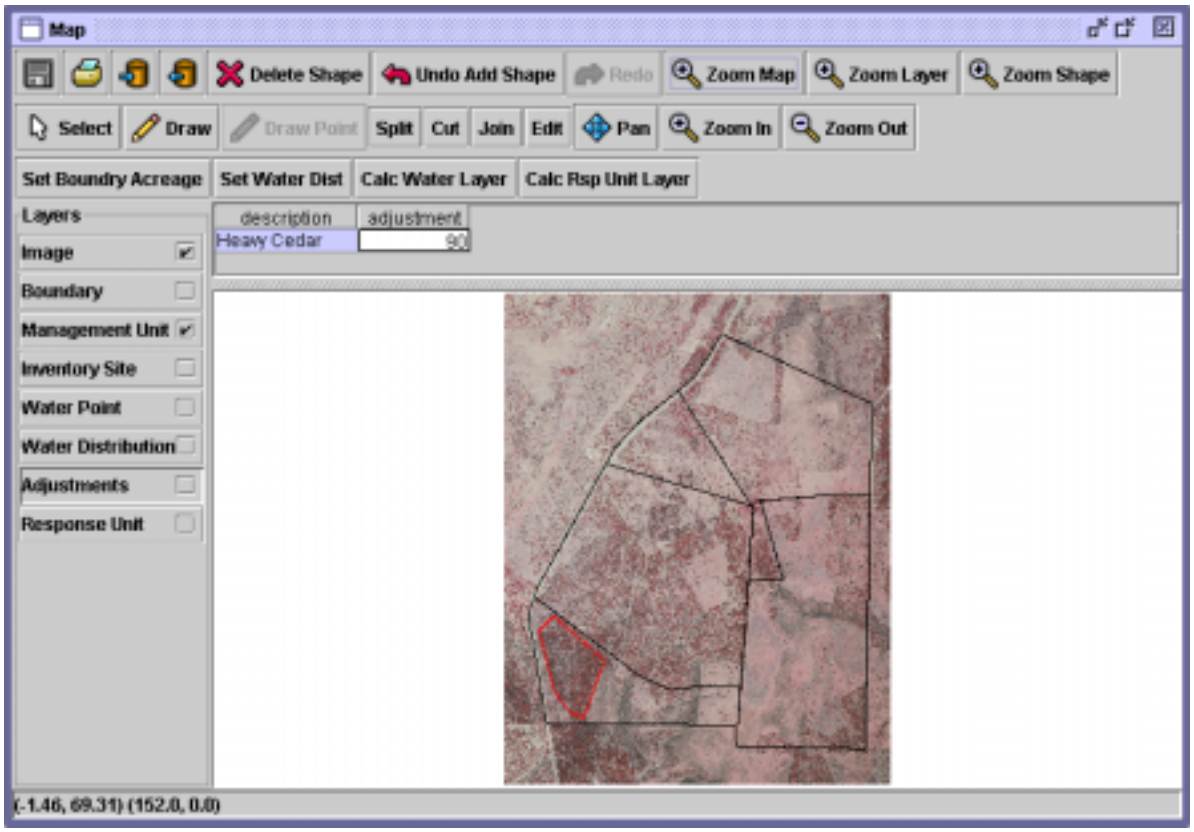


Figure 2.7 Adjustment Layer

Follow these instructions to create an Adjustment layer:

1. Click the ***Adjustment*** button from the Layers section at the left side of the screen.
2. Click the ***Draw*** icon- -to begin setting your adjustment areas.
3. Draw the areas on the map where adjustments occur.
4. Enter a description and an adjustment factor for each adjustment area that was created. The adjustment factor is entered as a whole number, so a 90% reduction would be 90.0 as in the case noted above.

Response Unit Layer

The ***Response Unit*** (figure 2.9) Layer helps calculate the amount of forage available to for grazing. It utilizes the location of the water points and the predicted grazing behavior of the animals in response to the proximity to the water.

Click the ***Calculate Response Unit Layer*** button to create the ***Response Unit*** Layer. WebGLA will automatically create this layer using the other layers as a reference. Additionally, webGLA will automatically enter all of the information that appears in the overhead spreadsheet.

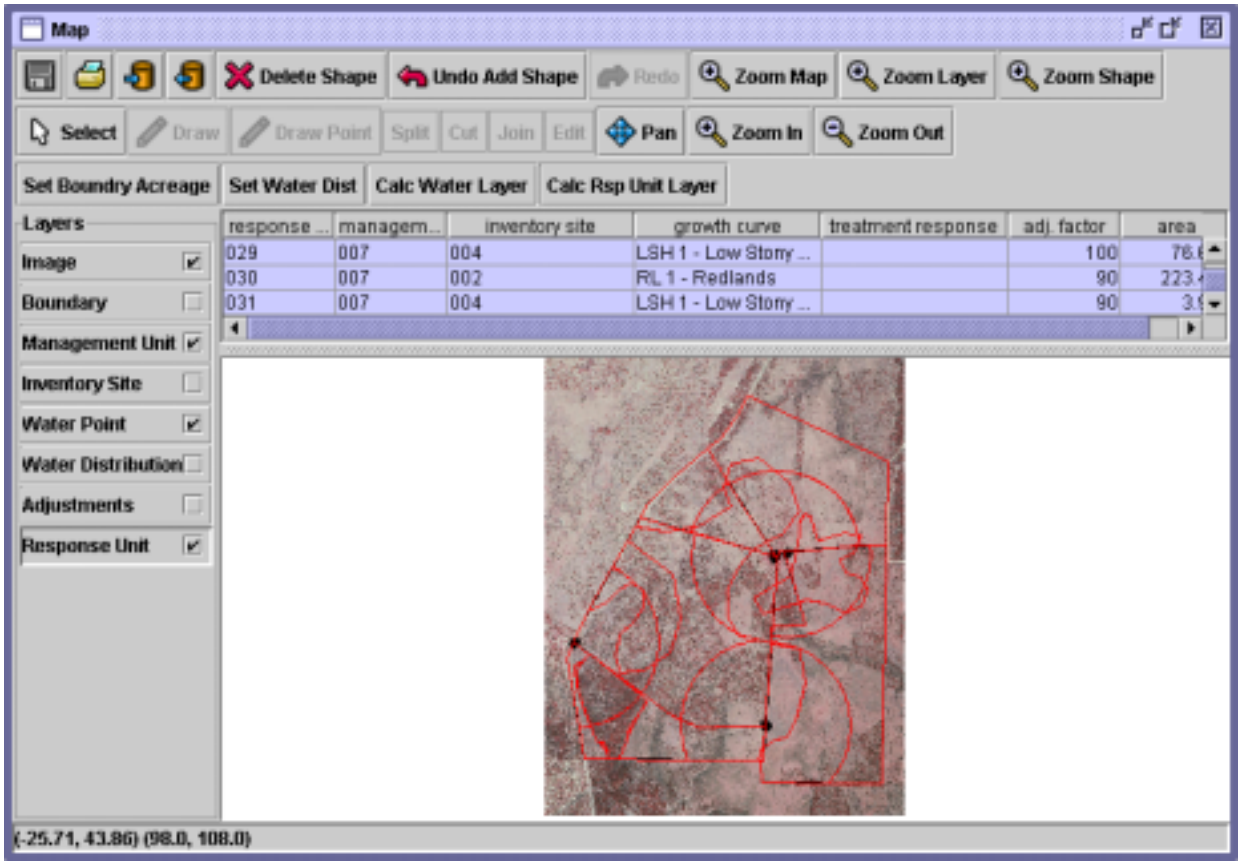


Figure 2.9 Response Unit Layer

3

Chapter 3 Client Data

The ***Client Data*** section allows you to enter and calculate data that is specific to a certain client. In order to access data for a particular client you must set the client in the ***Client*** form of ***webGLA*** (see page 37). You will not be able to access any part of the client data section until you have selected the client.

The ***Client Data*** section contains the following sub-sections:

- Client Info
- Herd Inventory
- Roughage
- Management Units
- Inventory Sites
- Response Units
- Transects
- Preference-Based Stocking Calculator
- Prescribed Grazing

Note:

In webGLA the mapping tool is listed under **Client Data.** However, due to the size and complexity of this feature, it has been given its own chapter. Instructions for using the mapping tool can be found in **Chapter 2 Mapping in webGLA.** We strongly recommend completing the mapping section before moving on to the rest of the **Client Data** sections. The map section automatically calculates many of the many of the numbers necessary in this chapter.

Client Info

The ***Client*** form allows you to enter information on your clients or ranches. Filling out the information in the ***Clients*** box (figure 3.1) and setting a client will allow you to access information under the ***Clients*** and ***Client Reports*** headers.

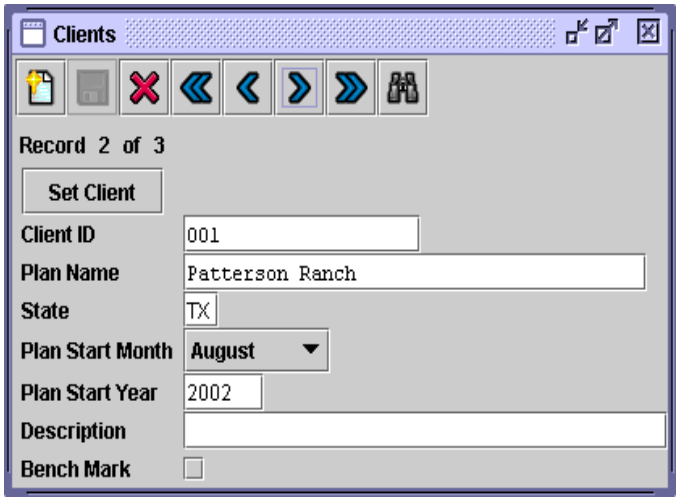


Figure 3.1 Client Form

Tip

Be sure to click the **New Record** button when adding a client. If you just modify the information in the boxes and click save, you will not add a new client. This will just change the name of the existing client.

Follow these directions to enter and set clients in the ***Clients database***:

1. Click the ***Client Data*** menu and select ***Client Info***.
2. Click the ***New Record*** button--to create a new record to enter Client data. (The first time you enter a client, ***webGLA*** will automatically create a new ***Client*** record.)
3. Enter the client's identification code in the ***Client ID*** box.
4. Enter the name of the plan or ranch in the ***Plan Name*** box.
5. Enter the earliest date you wish to begin using data in the ***Plan Start Date*** box.
6. Enter any description to further identify the client in the ***Description*** box.
7. Click the ***Save Record*** button--to save the record you have just created.
8. Repeat steps 2 through 7 for any additional clients you wish to enter at this time.

If you wish to set a client as a ***Bench Mark Client***, check the ***Bench Mark*** box. You may only select one client as a benchmark. If you wish to begin working on the client specific functions of ***webGLA*** such as the Mapping Tool, move to the client and hit the ***Set Client*** button.

Herd Inventory

A herd can only be comprised of a single species of animals but a single species can be represented in multiple herds, eg. 3 cattle herds, 2 goat herds and 1 sheep herd sharing a pasture with a deer herd and two migratory elk herds. It is important to note that you can simple specify a kind of animal and the number of head for one class with an average AUE value and stop at that point if you feel that it is sufficient to characterize demand of the herd. The program will automatically fill the same number of head in each month and assign the same monthly AUE value all through the year. However, if you want to represent more than one class of animal and alter the demand profile of the herd you can go to each month and adjust the animal numbers and/or the AUE values.

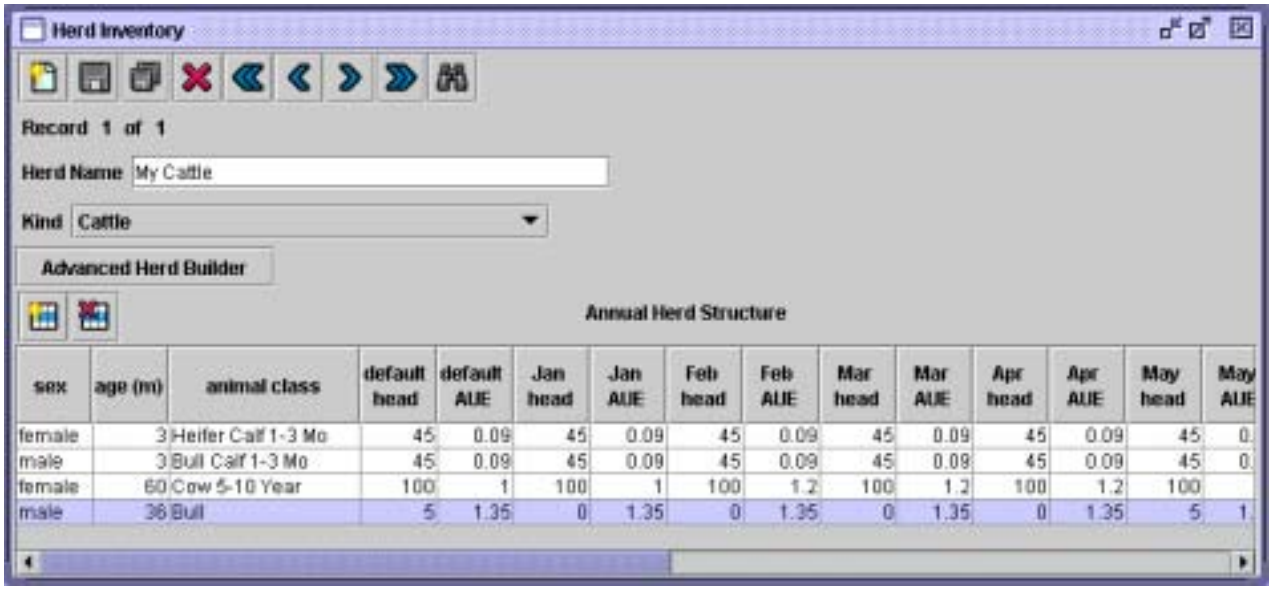

Herd Inventory
Record 1 of 1
Herd Name My Cattle
Kind Cattle
Advanced Herd Builder
Annual Herd Structure
sex age (m) animal class default head default AUE Jan head Jan AUE Feb head Feb AUE Mar head Mar AUE Apr head Apr AUE May head May AUE
female 3 Heifer Calf 1-3 Mo 45 0.09 45 0.09 45 0.09 45 0.09 45 0.09 45 0.09 45 0.
male 3 Bull Calf 1-3 Mo 45 0.09 45 0.09 45 0.09 45 0.09 45 0.09 45 0.09 45 0.
female 60 Cow 5-10 Year 100 1 100 1 100 1.2 100 1.2 100 1.2 100 1.2 100
male 36 Bull 5 1.35 0 1.35 0 1.35 0 1.35 0 1.35 5 1.

Figure 3.2 Herd Inventory Form

Follow the directions below to use the Herd Inventory and Management form:

1. Set a client in ***Client*** section of webgla before using this module.
2. Click ***client data*** button at the top of the screen to drop down a menu of options.
3. Choose ***Herd Inventory and Management*** database.

4. Click the ***New Record*** button to create a new record to enter herd information. The first time you enter a herd, webGLA will automatically create a new Herd Inventory and Management record.
5. Enter the name of the herd in the box marked ***Herd Name.*** Naming conventions should reflect names that the producer can readily recognized. If you anticipate splitting a herd at some point such as 2 bulls going to one herd and 4 bulls going to another herd during breeding season, it is best to recognize those two groups as two separate herds for scheduling purposes. This assumes you are going to use the grazing scheduler which is optional to this planning process.
6. Click the gray box marked ***Kind*** to select the animal species of this herd. These species are the ones entered previously in the ***Animals*** section of the ***Resource Data.***
7. Click on the ***Add Row*** button and enter the sex of the animal from the dropdown menu in the sex column. Next enter the age in months of the animals. The animal class and AUE will automatically fill in. Next enter the number of animals in the default head column. The rest of the values will automatically fill in. *Note: If you feel the default AUE value is not correct for your situation, you can change the value to fit your needs.*
8. If you wish to stop at this point you can by saving pressing the ***Save Record***
9. If you wish to adjust the monthly values, you may click into the desired field and change the value in any month.

Editing your data can be done in the following manner

1. You can change the name of the herd and press the ***Save As***
2. You can delete a class by clicking on the row in the ***Annual Herd Structure*** and then pressing the ***Delete Row*** button .

Also included on this form is a button for the ***Advanced Herd Builder***. This is used to get a month by month AUE value for the kind of animal selected on the ***Herd Inventory*** form.

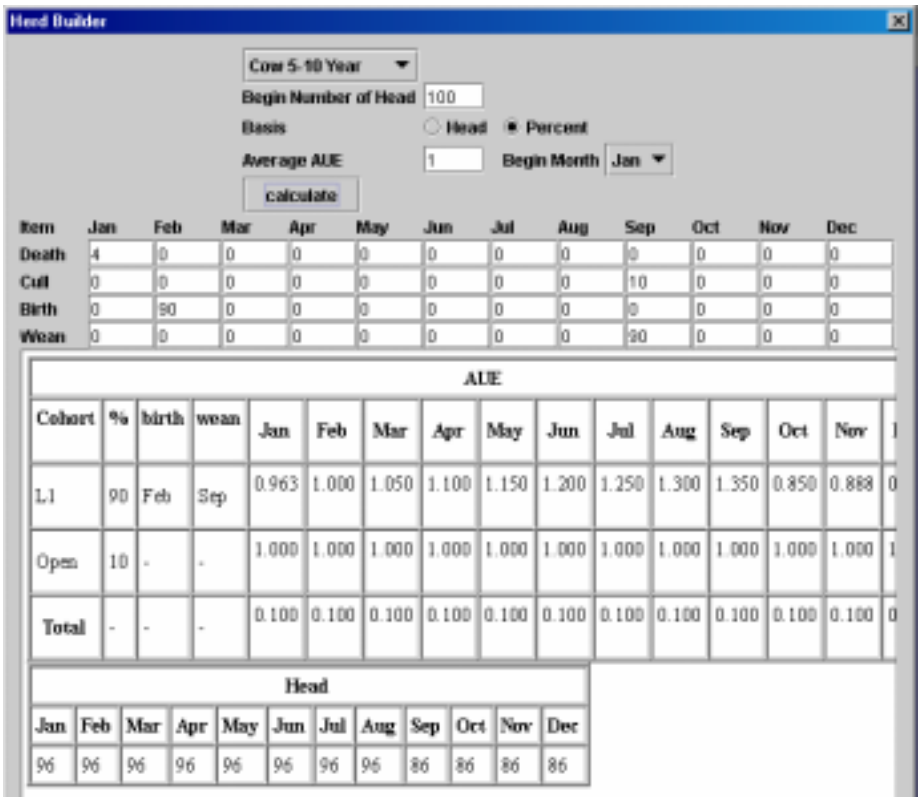

Herd Builder
Cow 5-10 Year
Begin Number of Head 100
Basis Head Percent
Average AUE 1
Begin Month Jan
calculate
Item Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Death 4 0 0 0 0 0 0 0 0 0 0 0
Cull 0 0 0 0 0 0 0 0 10 0 0 0
Birth 0 90 0 0 0 0 0 0 0 0 0 0
Wean 0 0 0 0 0 0 0 0 80 0 0 0
AUE
Cohort % birth wean Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov
L1 90 Feb Sep 0.963 1.000 1.050 1.100 1.150 1.200 1.250 1.300 1.350 0.850 0.888
Open 10 - - 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000
Total - - - 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100 0.100
Head
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
96 96 96 96 96 96 96 96 86 86 86 86

Figure 3.3 Advanced Herd Builder

To begin, follow these instructions:

1. Click the ***Advanced Herd Builder*** button on the ***Herd Inventory*** form.

2. Select the age class from the drop down menu that you desire to work with.

3. Enter a beginning number of animals in the ***begin number of head*** box.

4. Select a basis for which the numbers you enter will be applied. If you want to enter exact numbers, select head, or if you want to use a percentage of the beginning number of head, select percentage.

5. Next enter an average AUE value and select the beginning month of the profile.

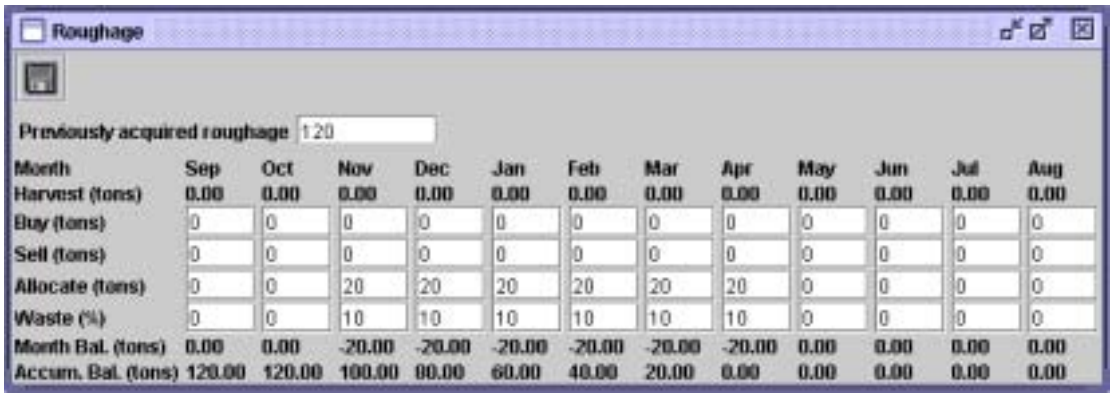
6. Fill in the appropriate numbers under each month for expected deaths and the number of culls you plan to remove. Again, these values entered here are actual animal numbers or percentages (expressed as whole numbers) depending on which method you selected.

7. If the type of animal selected is a breeding animal, you need to enter values for birth and weaning. If not, leave these rows bank, and proceed to the next step. For the birth row, enter values for births under the months for which you expect your animals to calve. For the weaning row, enter the values under the months when you plan to wean.

8. Click the calculate button. The table in the bottom half of the form will fill in with the AUE values and head values for each month for the selected animal.

Roughage

The ***Roughage Form*** allows you to track and manage the roughage you will put out for your animals. The ***Roughage Form*** has two separate sections: the top spreadsheet tracks the origins and storage of your roughage, and the bottom spreadsheet tracks when and where you feed the roughage to your animals.



Month	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Harvest (tons)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Buy (tons)	0	0	0	0	0	0	0	0	0	0	0	0
Sell (tons)	0	0	0	0	0	0	0	0	0	0	0	0
Allocate (tons)	0	0	20	20	20	20	20	20	0	0	0	0
Waste (%)	0	0	10	10	10	10	10	10	0	0	0	0
Month Bal. (tons)	0.00	0.00	-20.00	-20.00	-20.00	-20.00	-20.00	-20.00	0.00	0.00	0.00	0.00
Accum. Bal. (tons)	120.00	120.00	100.00	80.00	60.00	40.00	20.00	0.00	0.00	0.00	0.00	0.00

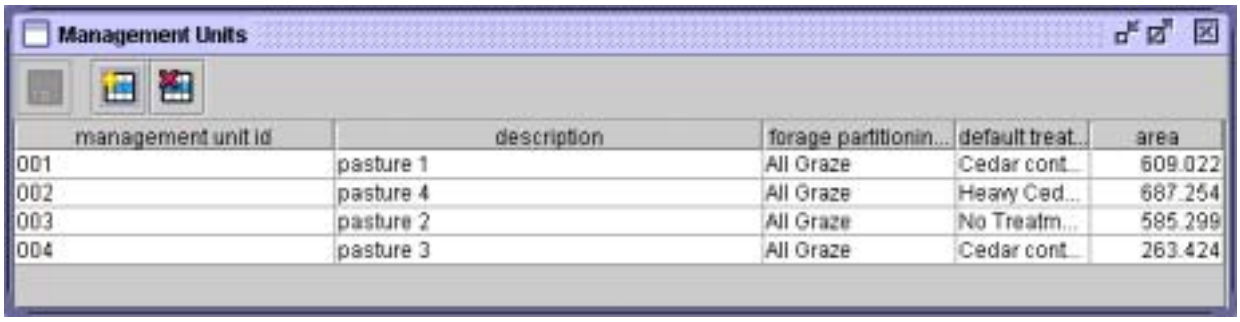
Figure 3.4 Roughage Form

Follow the directions below to create the ***Roughage*** spreadsheets:

1. Set a client in the Clients Form.
2. Click the ***Client Data*** button at the top of the screen to drop down a menu of options.
3. Choose ***Roughage*** from the menu to open up the ***Roughage*** form.
4. Roughage harvested on site will be controlled by the forage partitioning profiles. A harvest forage partitioning profile must be created and applied for the period forage will be harvested for the appropriate management unit. See Forage Partitioning Profiles in Chapter 1 for more information. Once a forage partitioning profile has been applied to a management unit, the expected amount of forage harvested will automatically be filled in the first row.
5. Enter any forage acquired before the management plan started in the ***Previously Acquired Roughage*** box.
6. Next enter the amount of forage you wish to buy or sell and the appropriate month in which you choose to do so.
7. Finally enter the amount of forage you plan to allocate per month and the percent of that allocation that is expected to be wasted.
8. When you are through, click the save button to save your changes.

Management Units

The ***Management Units Form*** allows you to define and describe the different management units or pastures of your ranch using a spreadsheet. We strongly recommend that you complete the ***Map*** section before you attempt to create the ***Management Units*** spreadsheet. The ***Map*** section will automatically enter figures and make calculations for columns of the ***Management Units*** spreadsheet.



management unit id	description	forage partitionin...	default treat...	area
001	pasture 1	All Graze	Cedar cont...	609.022
002	pasture 4	All Graze	Heavy Ced...	687.254
003	pasture 2	All Graze	No Treatm...	585.299
004	pasture 3	All Graze	Cedar cont...	263.424

Figure 3.5 Management Unit Table

Follow the directions below to create the ***Management Units*** spreadsheet (**instructions found in italics must only be followed if you have not completed the *Map*section**):

1. Set a client in the ***Clients*** section of **WEBGLA**.
2. Click the ***Client Data*** button at the top of the screen to drop down a menu of options.
3. Choose ***Management Units*** from the menu to open up the ***Management Units*** section.
4. Click the ***Add Row*** button- -to begin creating the ***Management Units*** spreadsheet. If you have already created a Map of your ranch, the management units will automatically appear as lines in the spreadsheet.
5. Enter the name or number of the management unit in the ***management unit id column*** if you have not completed the ***Map*** section.
6. Enter a brief description of the management unit in the ***description*** column.

7. Click in the column marked ***default forage partitioning profile*** to drop down the list of forage partitioning profiles that you may select from. The forage partitioning profiles may be found in the ***Resource Data***.
8. Click in the column marked ***default treatment response*** to drop down the list of treatment response records that you may select from. The treatment response records may be found in the ***Resource Data***.
9. Enter the area of your management unit in acres in the *area* column if you have not completed the ***Map*** section.
10. Click the *Save* button- -to save the ***Management Units*** spreadsheet when you have finished creating it.

Inventory Sites

The ***Inventory Sites*** section allows you to track the ecological sites and forage suitability groups present on your ranch. We strongly recommend that you complete the ***Map*** section before you attempt to create the ***Inventory Sites*** spreadsheet. The ***Map*** section will automatically enter figures and make calculations for columns of the ***Inventory Sites*** spreadsheet.

site id	entry method	ecological site	transect/scenario	growth curve	initial standing crop (lbs/a)	area	yield (lbs/a)
001	Transect P...	LSH - Low Stony Hill		LSH 1 - Low Stony Hill	0	902.213	0
002	Transect P...	RL - Redland		RL 1 - Redlands	0	938.114	0
003	Transect P...	RL - Redland		RL 1 - Redlands	0	135.301	0
004	Transect P...	LSH - Low Stony Hill		LSH 1 - Low Stony Hill	0	124.372	0

Figure 3.6 Inventory Sites Table

Follow the directions below to create the ***Inventory Sites*** spreadsheet.

1. Set a client in the ***Clients*** section of ***webGLA***.
2. Click the ***Client Data*** button at the top of the screen to drop down a menu of options.
3. Choose ***Inventory Sites*** from the menu to open up the ***Inventory Sites*** section.
4. Click the ***Add Row*** button- -to begin creating the ***Inventory Sites*** spreadsheet. If you have already created a map of your ranch, the inventory sites will automatically appear as lines in the spreadsheet.
5. Enter the name or number of the inventory site in the ***site id*** column if you have not completed the ***Map*** section.
6. Find the ***Entry Method*** column in the table at the top of the screen.
7. Click on the ***Entry Method*** box to select from the following choices:
    1. Usable Forage Production
    2. Transect Production
    3. Animal Preferences Basis
8. If you select the transect method, you must select a transect in the ***transect/scenario*** column. If you select the animal preference method, you must select a scenario created by the Preference Based Stocking Calculator in the ***transect/scenario*** column. WebGLA will calculate

Forage (lbs/a) automatically for these two methods. If you select the Usable forage production method, you must enter the forage value directly in the ***yield*** column.

9. Choose the ***name*** of the ecological site from the drop down list in the ***Ecological Site*** column.
10. Choose the ***transect*** or ***scenario*** from the drop down list in the ***transect/scenario*** column if you chose the transect or animal preference method. If you chose the useable forage method, leave this column blank.
11. Choose the ***growth curve*** from the drop down menu in the ***growth curve*** column.
12. Enter the ***initial standing crop*** of grazeable plant matter for the site in pounds per acre in the ***initial standing crop*** column, if necessary.
13. Repeat these steps until you have entered the information for all shapes in the inventory site layer.
14. Click the ***Save*** button- -to save the ***Inventory Sites*** spreadsheet when you have finished creating it.

Response Units

The ***Response Units*** Spreadsheet helps calculate the amount of forage available to for grazing. It utilizes the location of the water points and the predicted grazing behavior of the animals in response to the proximity to the water. We strongly recommend that you complete the ***Map*** section before you attempt to create the ***Response Units*** spreadsheet. The ***Map*** section will automatically enter figures and make calculations for columns of the ***Response Units*** spreadsheet.

response ...	managem...	inventory site	growth curve	treatment response	adj. factor	area
001	001	001	LSH 1 - Low Stony ...	Cedar control	100	36.852
002	001	002	RL 1 - Redlands	Cedar control	100	132.959
003	001	004	LSH 1 - Low Stony ...	Cedar control	100	51.436
004	001	001	LSH 1 - Low Stony ...	Cedar control	90	37.388
005	001	002	RL 1 - Redlands	Cedar control	90	339.486
006	001	004	LSH 1 - Low Stony ...	Cedar control	90	9.011
007	001	002	RL 1 - Redlands	Cedar control	80	1.889
008	002	001	LSH 1 - Low Stony ...	Heavy Cedar Control	100	219.922
009	002	002	RL 1 - Redlands	Heavy Cedar Control	100	85.912
010	002	004	LSH 1 - Low Stony ...	Heavy Cedar Control	100	0.69
011	002	001	LSH 1 - Low Stony ...	Heavy Cedar Control	90	217.55
012	002	003	RL 1 - Redlands	Heavy Cedar Control	90	128.597
013	002	001	LSH 1 - Low Stony ...	Heavy Cedar Control	80	30.62
014	002	003	RL 1 - Redlands	Heavy Cedar Control	80	3.964
015	003	001	LSH 1 - Low Stony ...	No Treatment	100	72.822
016	003	002	RL 1 - Redlands	No Treatment	100	200.776
017	003	004	LSH 1 - Low Stony ...	No Treatment	100	97.003
018	003	002	RL 1 - Redlands	No Treatment	90	190.337

Figure 3.7 Response Unit Table

Follow the directions below to create the Response Units Spreadsheet:

1. Set a client in the ***Clients*** section of **WEBGLA**.
2. Click the ***Client Data*** button at the top of the screen to drop down a menu of options. Click on Response Units.
3. Click the add row button - - to add a new row.
4. Enter a response unit number. Then select a management unit number, inventory site, growth curve, and treatment response from the drop down menus. Enter the adjustment factor and acreage of the response unit.
5. Repeat steps 3 and 4 until you have added all of the response units.
6. When you are finished, click the save button - - to save the response units.

Transects

Transects are plant communities in a certain area that you observe at a certain time.

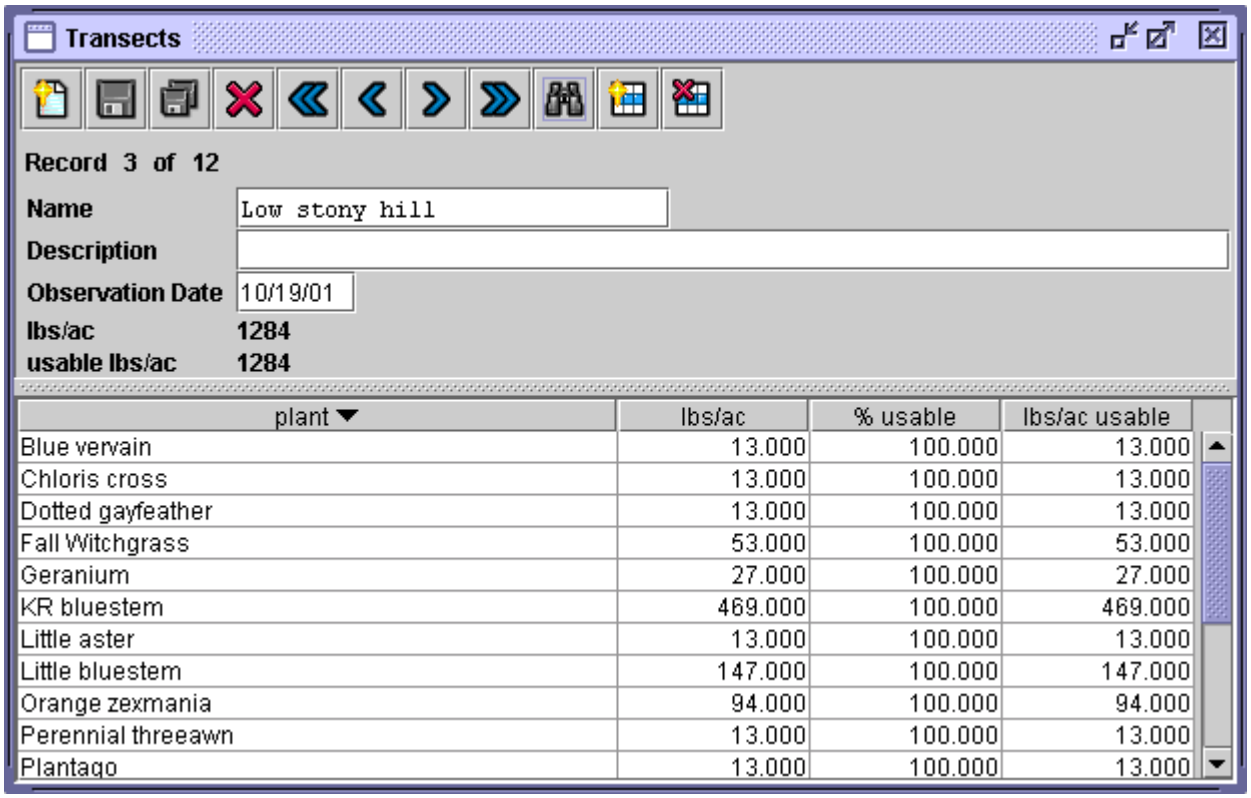


Figure 3.8 Transect Form

Follow the directions below to create a transect:

1. Click the ***Client Data*** button to drop down a menu of options.

2. Choose ***Transects*** from the menu to open up the ***Transects*** database.
3. Click the ***New Record*** button- -to create a new record to enter transects. (The first time you enter an transect, webGLA will automatically create a new ***Transects*** record.)
4. Enter the name of the transect in the box marked ***Name***.
5. Enter a description of the transect in the box marked ***Description***.
6. Enter the date you collected the transect data in the box market ***Observation Date***.
7. Click the ***Add Row*** button- - at the top of the screen to begin creating the spreadsheet for the ***Transects***.

8. Click in the ***plant*** column to drop down a list of the plants you entered in the ***Plants*** section of the ***Resource Data***.
9. Select the plant you wish to catalogue first by clicking on it.
10. Enter the pounds of plant present in one acre of the transect in the ***lbs/a*** column.
11. Enter the percent of usable plant present in the transect in the ***% usable*** column.
12. The amount of usable plant matter will automatically be calculated based on the pounds per acre and percent usable values.
13. Continue adding lines of data until you have finished the transect.
14. Click the ***Save Record*** button- -to save the record when you are ready to move to the next ***Transects*** record.
15. Click the ***New Record*** button- -to create the next ***Transects*** record.

Tip

Be sure to delete and blank rows left over after entering your transects. The blank rows will not affect any calculations, but they will prevent you from being able to print out the Transect Reports, so be sure to delete them using the delete row button .

Preference-Based Stocking Calculator

The preference-based stocking calculator is designed to allow you to compute the stocking rate of a vegetation complex as defined by a transect's annual production, the mean monthly growth curve, population density of wildlife species and the desired stocking ratio of domestic animals. The calculator computes stocking rate and associated harvest efficiency (%) for all livestock species combine, separate stocking rates for each domestic species, projected average diet for all the animal species specified. You can influence stocking rates by changing maximum single species harvest efficiency (%) and the maximum allowed composition of the undesirable species. The animal's can be scheduled onto the site at different times of the years and the same species can enter the site more than once to simulate migrating herds of different wildlife species such as elk. Before you can use this application you must have a transect in the database and a growth curve developed for that transect. Also, you must have the animal species recorded in the database before you can select them in this application.

Please note that the name of each record can be attached to a site or response unit in the forage inventory system in the same manner as the transect name is used. The combined stocking rate and associated harvest efficiency will be used by the forage inventory system to compute stocking levels of the various managements, where designated.

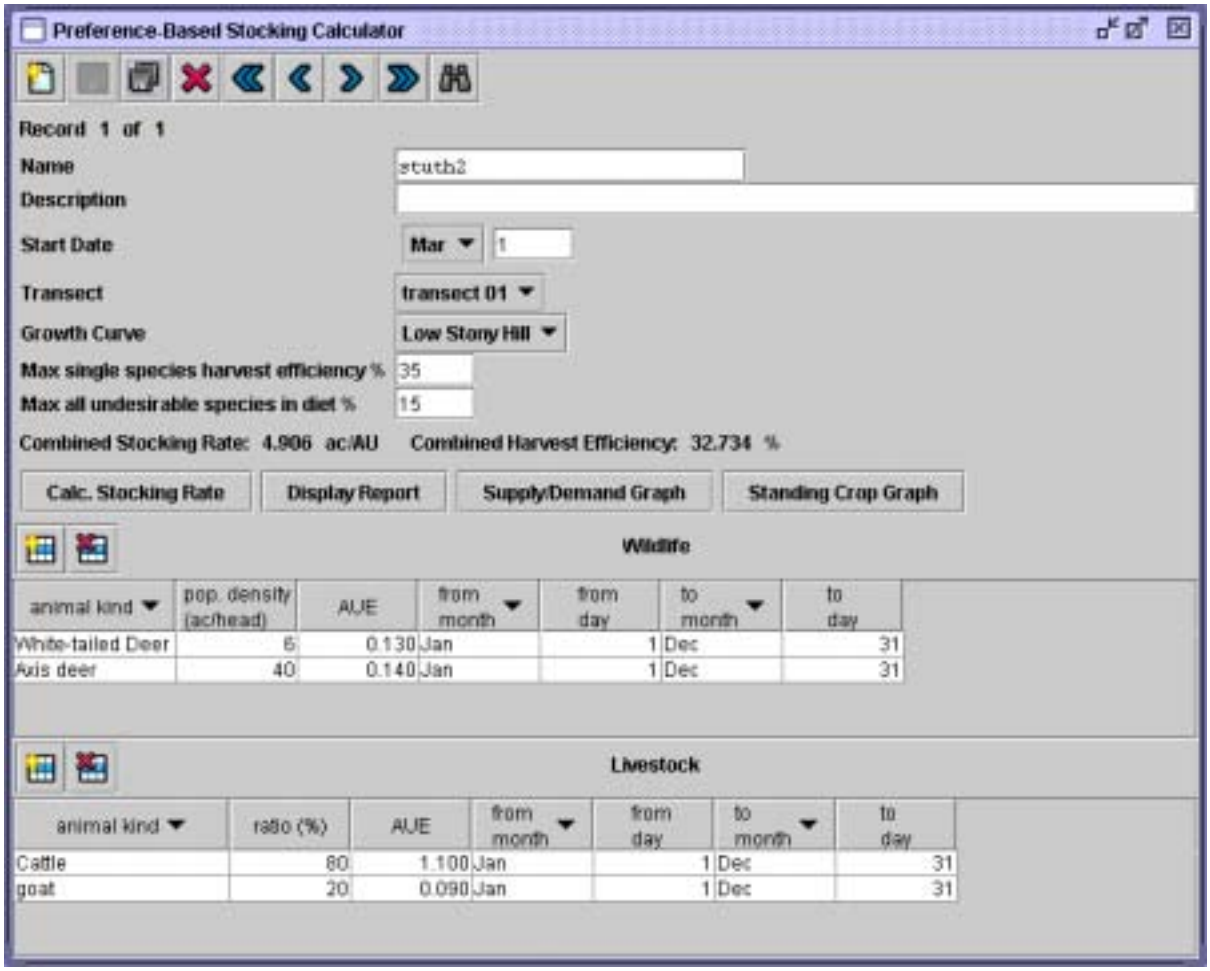


Figure 3.9 Preference Based Stocking Calculator

Follow the directions below to use the multiple species stocking calculator:

1. Click or tab into the ***Name*** field and type in the desired name of the case. Be as descriptive as possible to allow you to recall the name of the case that fits the site or response unit that it will be applied to.
2. Click or tab into the ***Description*** field and add more descriptive information to help document the basis of the calculation.
3. Click or tab into the month field of the ***Start Date*** record and select the starting point for the computation. Normally this is the month of the start of the growing season. Then click into the day of month field and indicate the day within that month you want to start the computations.
4. Click or tab into the ***Transect*** field and the list box will allow you to select a transect that was set up in the transect database.

5. Click or tab into the ***Growth Curve*** field and the list box will allow you to select a transect that was set up in the transect database.
6. Click or tab into the next field and enter the ***maximum single species harvest efficiency*** that you desire. Normally, a value of 35% is used as this seems to provide the best "safe" stocking levels. However, when you are grazing less complex communities and using management intensive or intensive rotational grazing systems this number can be higher.
7. Click or tab into the next field and enter the ***maximum level of undesirable species in the diet*** that you desire. Normally, a value of 15% is used as this seems to provide the best "safe" stocking levels. However, when you are grazing plant communities that are in poor condition or dominated by undesirable species you will have to adjust this number higher. The key is that you may have to stock more conservatively if you want the land to improve, forcing a lower percent consumption of undesirable species.
8. If you desire to input a wildlife species, click the ***Add Row*** button button and then click into the "animal kind" cell and select the desired wildlife species. You can delete a row or animal kind at any time by simply clicking the animal kind and then pressing the ***Delete Row*** button
9. Input the known population density of the animals, the AUE value (animal unit equivalent), and the month/day onto the site and month/day off the site.
10. Once this is accomplished, click the next "add row" button and then click the "animal kind" cell and select the desired livestock species.
11. When a species has been selected, then enter the desired ratio of demand among the domestic species, their AUE value and the month/day onto the site and month/day off the site.

Now you are ready to compute the combined stocking rate, display your reports, view supply demand graphs and view standing crop graphs.

1. To determine the combined stocking rate for the domestic livestock considering the forage set aside for the specified wildlife population, press the ***Calc Stocking Rate button.*** The combined stocking rate and harvest efficiency will be displayed immediately above the button.
2. To view the diets selected by each animal species specified and the associated stocking rate, click on the ***Display Report*** button.

3. The ***Supply / Demand Graph*** button provides a good indication if the chosen level of maximum harvest efficiency and maximum undesirables in the diet, will provide a graph of how the forage is produced and how the animals demand that forage to view excesses and shortfall in forage supply.
4. The ***Standing Crop Graph*** is designed to determine if the chosen level of maximum harvest efficiency and maximum undesirables in the diet, will provide a the desired effect on end of season forage supply. If the beginning and ending standing crop is the same then we would assume that the supply and demand well matched. If the ending number for standing crop is higher than the beginning number, then the site would be producing more forage than the animals would eat given the diet preference constraints. However, if the ending standing crop is lower than the beginning standing crop number, then demand is higher than supply and the stocking rate would be considered heavy.

5. When you complete the analysis and are satisfied with the results. Press the ***Save Record*** button

Prescribed Grazing

This tool will allow you to determine the recommended number of days of grazing for your management units.

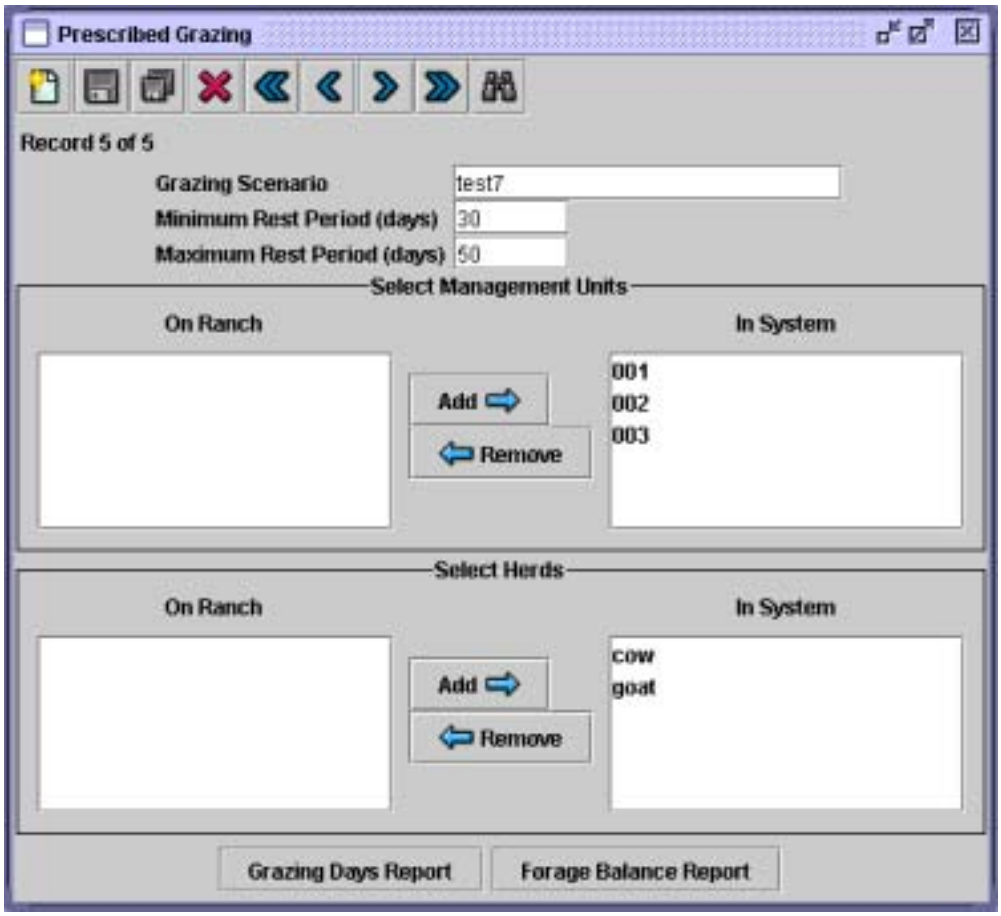


Figure 3.10 Prescribed Grazing Form

Follow these steps to create a grazing days report.

1. Click the add record button - - to add a new record.
2. Type in a scenario name and the minimum and maximum rest period for the management units.
3. Highlight a management unit in the ***On Ranch Box*** you wish to include in the report and click the add button. Do this for each management unit you wish to include in the report. If you want to remove a management unit from the scenario, highlight the management unit in the ***In System*** box and click remove.
4. Do the same procedure for the herds.
5. Click the save record button - - to save the scenario.
6. Click the ***Grazing Days Report*** button at the bottom of the form to view the report.
7. You can also click the ***Forage Balance Report*** button to view the forage balance report. This is the same report as the one listed under Client Reports.

4

Chapter 4 Reports

Resource Reports

The ***Resource Reports*** section consists of reports gathered from the data entered in the ***Resource Data*** section. You do not need to input any data. This section is merely an output section for the data that you entered previously. There are several reports available for your examination in the ***Resource Reports*** section.

You do not need to set a client to access the ***Resource Reports***.

Follow the steps below to access the Resource Reports:

1. Click the ***Resource Reports*** button at the top of the screen to drop down a list of resource reports:
    1. Plants
    2. Animal Kinds
    3. Growth Curves
    4. Treatment Response
    5. Forage Partitioning Files
    6. Transects
2. Click on the name of the report you wish to examine.
3. A small box will appear. Select the items in the box that you want to view in the report. If you wish to select more than one item, hold down the control key (**ctrl**) on the keyboard and click each item you wish to select. If you want to select all of the items, click **select all.** Click OK to view your report.

Client Reports

The ***Client Reports*** section consists of reports gathered from the data entered in the ***Resource Data*** and ***Client Data*** sections. You do not need to input any data. This section is merely an output section for the data that you entered previously. There are three reports available for your examination in the ***Client Reports*** section.

By understanding and examining these reports, you may improve the management of your ranch.

Follow the steps below to access the ***Client Reports***:

1. Set a client in the ***Clients*** section of **WEBGLA**.
2. Click the ***Client Reports*** button at the top of the screen to drop down a list of client reports:
    1. Grazed Forage Inventory
    2. Forage Balance
    3. Forage Balance Graph
    4. Herd Definition
3. Click on the name of the report you wish to examine.

Appendix

Utilities

- Useable Production Calculator
- Preference Based Stocking Calculator

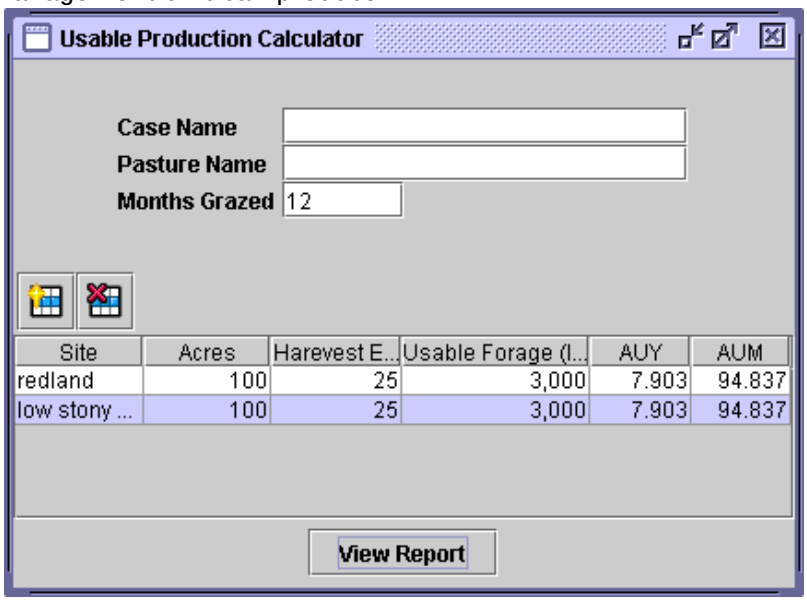
Icon Reference

Troubleshooting

Conversion Tables

Useable Production Calculator

Use this calculator to quickly determine the number of AUM's and AUY's that a management unit can produce.

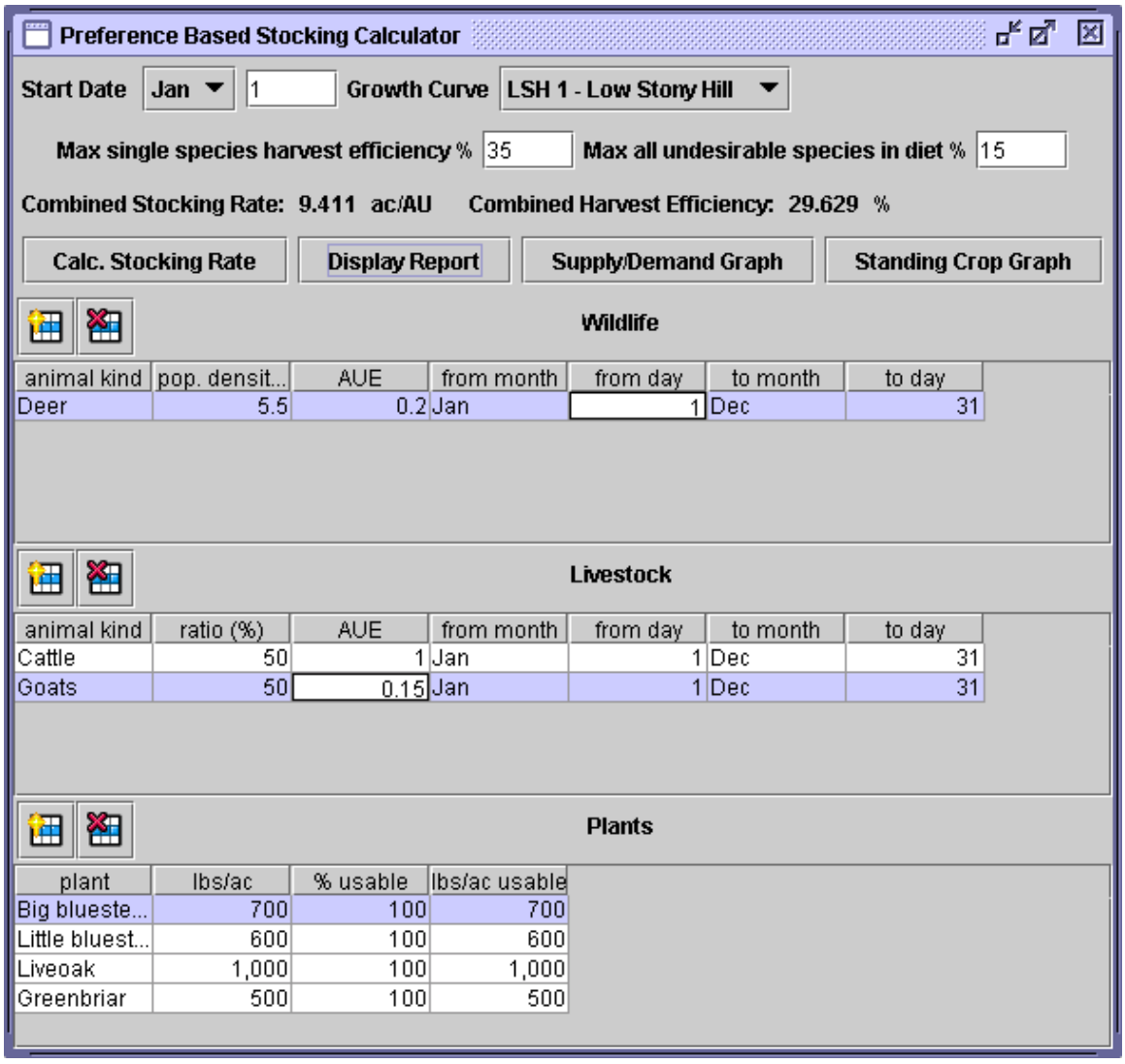


Follow these instructions to calculate the useable production of a pasture.

1. Enter a case name, such as the name of the ranch
2. Enter the name of the pasture you are calculating the useable production for
3. Enter the number of months the pasture will be grazed
4. One row in the table is already present. Enter the ecological site name under site.
5. Enter the number of acres of the ecological site.
6. Enter a Harvest Use percentage. Default is 25%.
7. Enter the amount of useable forage in lbs/acre.
8. The AUY's and AUM's will automatically be calculated for you.
9. To add another ecological site, click the add row button - - and repeat the process.
10. To remove an ecological site, highlight the row you want to remove, and click the remove row icon - .
11. To view a printable table, click the **View Report** button. Click the print icon to print the report, or click the save icon to save the report as an HTML file.

Preference Based Stocking Calculator

The preference based stocking calculator found in the Utilities menu is very similar to the one found in the Client Data menu, with one major exception. The calculator in the Client Data menu uses the plant list from a transect that you select from the list of available transects for that client. The calculator in the Utilities menu requires that you "build a transect" of plants to use for the calculations. Since this form basically combines the Preference Based Stocking Calculator form and the Transect Form, I will not go through a detailed explanation of how to use the form. Rather you can read the instructions for using the calculator here and the instructions on how to enter a transect here.


Preference Based Stocking Calculator
Start Date
Jan
1
Growth Curve
LSH 1 - Low Stony Hill
Max single species harvest efficiency %
35
Max all undesirable species in diet %
15
Combined Stocking Rate: 9.411 ac/AU
Combined Harvest Efficiency: 29.629 %
Calc. Stocking Rate
Display Report
Supply/Demand Graph
Standing Crop Graph
Wildlife
animal kind | pop. densit... | AUE | from month | from day | to month | to day
Deer | 5.5 | 0.2 | Jan | 1 | Dec | 31
Livestock
animal kind | ratio (%) | AUE | from month | from day | to month | to day
Cattle | 50 | 1 | Jan | 1 | Dec | 31
Goats | 50 | 0.15 | Jan | 1 | Dec | 31
Plants
plant | lbs/ac | % usable | lbs/ac usable
Big blueste... | 700 | 100 | 700
Little bluest... | 600 | 100 | 600
Liveoak | 1,000 | 100 | 1,000
Greenbriar | 500 | 100 | 500

webGLA Icons

Use the following list of icons as a quick reference guide to the icons that appear throughout the ***webGLA*** program. The name and function of each icon appears next to a picture of the icon. Additionally, when you are using ***webGLA***, icon names will appear if you hold the mouse pointer over the icon.

Record Icons

New Record Press this button to create a new data record.

Save Record Press this button to save the data record.

Save Record As Press this button to save the current record as a new record.

Delete Record Press this button to delete the record you are working on.

First record This button takes you directly to the first record in the set.

Previous record This button moves you to the previous record in the set

Next record This button moves you to the next record in the set.

Last record This button moves you to the last record in the set.

Find record This button allows you to search for a specific record.

Copy This button allows you to copy a row in a table

Paste This button allows you to paste rows in a table

Spreadsheet Icons

The following icons only appear when a record had spreadsheets. If a record has more than one spreadsheet, a set of these buttons will appear for each spreadsheet.

Add Row This button adds a new line to the bottom of your spreadsheet.

Delete Row This button deletes a line from the bottom of your spreadsheet.

Map Icons

The following icons only appear within the ***webGLA Map*** tool. Please note that in order to use the ***Map*** tool, you must set a client in the ***Client*** section of ***webGLA***.

Save Map Press this button to save the map.

Print Map This button allows you to print your map.

Open File This button allows you to browse for your layer's image file.

Export File This button allows you to export files from your computer to programs such as ArcView.

Delete Shape Click this button to delete a shape that you have drawn.

Select This button allows you to select shapes you have drawn so that you may edit them.

Draw This button allows you to draw shapes in your map.

Split This button allows you to split the boundary into management units or inventory sites.

Cut This button allows you to draw a management unit or inventory site that does not cross a boundary.

Join This button allows you to group two or more selected shapes. Click the shapes you wish to join. Double click on the last shape selected to join shapes.

Edit This button shows all vertices of a selected shape allowing you to manipulate the vertices. This can only be used to move vertices on the boundary layer before creating management units or inventory sites.

Pan Use this button to move to different locations on a map.

Zoom In This button zooms in on the map, enlarging the picture.

Zoom Out This button zooms out on the map, shrinking the picture.

Zoom to Map This button zooms to show the entire map.

Zoom to Layer Zooms to the currently selected layer.

Zoom to Shape This button zooms in on a selected shape.

Set Area This button allows you to enter the total area (in acres) of your ranch.

Set Water Dist This button allows you to tell the computer when to set the default water distribution.

Calc Water Layer This button adds the ***Water Layer*** to the map.

Calc Rsp Unit Layer This button adds the ***Response Unit Layer*** to the map.

Troubleshooting

If you make a mistake in webGLA's map tool, several options allow you to quickly fix your errors.

- **I accidentally marked a corner where there was not supposed to be one…**
  right click with your mouse to delete the last vertex. You may do this as many times as you need to and can even use this to delete partially formed shapes.
- **I place several of my corners wrong…**
  click on the ***Edit*** button and drag the vertices (corners) to their proper position.
  Note: This can only be used on the boundary layer, and must be done before management units or inventory sites are created.
- **I set the shape too soon and now it looks completely wrong…**
  click the Select icon- - and use the Select tool to select the shape you wish to delete. Click the Delete Shape button- - to remove the shape from your map.
  Note: Delete Shape cannot be used on management units or inventory sites created using the cut tool. The only way to revert a cut shape is to close the window without saving, and then reopen it. Hence, we highly recommend saving all work before using the cut tool.
- **I keep accidentally making lines and setting vertices when I use my touch pad on my laptop…**
  we highly recommend that you use a mouse when using the webGLA mapping tool, but if you do not have a mouse for your laptop, take off the click option from the touch pad.
- **I set my Water Point in the wrong spot…**

  Click on the water point layer button to activate it. Click the Select button and select the water point you wish to move. It will turn red. Click the Delete Shape button to delete the water point. Click the draw point button to draw the new water point in the correct location.

Conversion Tables

Length

imperial ->		metric
1 inch [in]		2.54 cm
1 foot [ft]	12 in	0.3048 m
1 yard [yd]	3 ft	0.9144 m
1 mile	1760 yd	1.6093 km
1 int nautical mile	2025.4 yd	1.852 km

metric ->		imperial
1 millimetre [mm]		0.0394 in
1 centimetre [cm]	10 mm	0.3937 in
1 metre [m]	100 cm	1.0936 yd
1 kilometre [km]	1000 m	0.6214 mile

Area

imperial ->		metric
1 sq inch [in^2]		6.4516 cm^2
1 sq foot [ft^2]	144 in^2	0.0929 m^2
1 sq yd [yd^2]	9 ft^2	0.8361 m^2
1 acre	4840 yd^2	4046.9 m^2
1 sq mile [mile^2]	640 acres	2.59 km^2

metric ->		imperial
1 sq cm [cm^2]	100 mm^2	0.1550 in^2
1 sq m [m^2]	10,000 cm^2	1.1960 yd^2
1 hectare [ha]	10,000 m^2	2.4711 acres
1 sq km [km^2]	100 ha	0.3861 mile^2

Mass

imperial ->		metric
1 ounce [oz]	437.5 grain	28.35 g
1 pound [lb]	16 oz	0.4536 kg
1 stone	14 lb	6.3503 kg
1 hundredweight [cwt]	112 lb	50.802 kg
1 long ton (UK)	20 cwt	1.016 t
1 short ton (US)	2,000 lb	0.907 t

metric ->		imperial
1 milligram [mg]		0.0154 grain
1 gram [g]	1,000 mg	0.0353 oz
1 kilogram [kg]	1,000 g	2.2046 lb
1 tonne [t]	1,000 kg	0.9842 long ton (UK)